

# MINT2270A

270W Dual Output Series

Medical – Universal Input Power Supply



2 Year Warranty

- 270W Convection Cooled AC-DC Power Supply
- Up to 90% Efficiency Typical
- Natural Interleaving Technology for PFC
- LLC Technology for DC Converter
- Remote ON/OFF by PS-ON Signal
- Approved to EN/IEC/UL60601-1 for Medical
- DC-OK, AC-OK Signal Active
- CE** Compliant (LVD, RoHS)



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 single phase.	<b>Turn On Time</b> Less than 2 seconds under all rated load conditions.
<b>Input Current</b> 115VAC: 3.0A max.	<b>Hold-up Time</b> 16 ms at 270W, nominal input (120VAC).
<b>Inrush Current</b> The inrush at 264VAC, at a cold start, will not exceed 45A.	<b>Overvoltage Protection</b> See chart for levels, latching type
<b>Input Fuse</b> T6.3A, 250VAC fuse provided on all models.	<b>Overload Protection</b> Hiccup Mode
<b>Power Factor</b> Complies with EN61000-3-2.	<b>Short Circuit Protection</b> Hiccup Mode
<b>Efficiency</b> 90% typical.	<b>Overtemperature Protection</b> Provided on all models, auto-recovery.
<b>Output Power</b> 270W continuous.	<b>Medical Safety Standards</b> EN/IEC/UL 60601-1, CSA22.2, No. 60601.1
<b>Ripple and Noise</b> 1% pk-pk max., 20MHz BW, differential mode. Measured with noise probe directly across output terminals.	<b>Isolation</b> Input-Output: 4000VAC, Input-Ground: 1500VAC, Output-Ground: 707VDC
<b>Output Voltages</b> See chart.	<b>Earth Leakage Current</b> 260µA typical at 264Vac, 50Hz.
<b>Total Regulation</b> See chart.	<b>Operating Temperature</b> 0° to 70°C, refer to derating curve.
<b>Minimum Load</b> Not required.	<b>Storage Temperature</b> -40 to +85°C.
<b>Transient Response</b> 500µs max. for a 50% load step, with 5mSec high load and 5mSec low load.	<b>Relative Humidity</b> 5% to 95%, non-condensing
<b>Enclosure Dimensions &amp; Weight</b> 3.35"W x 7.17"L x 1.17"H. See outline drawing. Weight: 550 grams	<b>MTBF (Mean-Time-Between-Failure):</b> 325,000 hours at 40°C operating ambient temperature.

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Model Number	Output No.	Output Volts (V)	Output Parameters		Total Regulation	OCP Limit	OVP Limit
			Output Current	Ripple & Noise			
MINT2270A1976E0X	1	5V	0.2A	1%	5%	1.5A	7.0V
	2	24V	11.25A	1%	2%	15.5A	30.0V

**Note:** "X" in model number as shown above is replaced by a numeral which will signify the remote on/off configuration, or other potential modifications. See model number key below.

## Specifications (continued)

### Remote ON/OFF (PS-ON):

On = logic high, off = logic low or open.  
Model suffix "01" will be in the normally OFF configuration. Model suffix "02" will be in the normally "ON" configuration.

### AC-OK Signal

"High" when input voltage exceeds 68VAC, "Low" when input voltage is less than 68VAC.

### DC-OK Signal

"High" when the 24V output is within normal range. "Low" upon an overvoltage, overcurrent, undervoltage, or short circuit condition, or when the PS-ON is disabled ("OFF").

### Shock

Operating: Half-sine, 20 g<sub>pk</sub>, 10 ms, 3 axes, 6 shocks total  
Non-Operating: Half-sine, 40 g<sub>pk</sub>, 10 ms, 3 axes, 6 shocks total

### 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

### Altitude

Operating: -500 to 10,000 ft. MSL  
Non-Operating: -500 to 40,000 ft. MSL

## EMI/EMC Compliance

Conducted Emissions	EN55011 Class B, FCC Part 15, Class B.
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 10V/m.
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz..
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11 240VAC, 0%/0.5 cycle, 40%/5cycles, 70%/25 cycles
Line Frequency Harmonics	EN61000-3-2, Class A

## Model Number Key

**MINT 2 270 A 19 76 E 01**

- 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.

Input Connector

Output Connector

Output Voltage Configuration, "19" = 5V, 24V outputs

Model Configuration

Output Power (Watts)

# of Outputs

Product Family: "M" = Medical, "I" = Internal, "NT" = New Technology

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## Outline Drawing & Connector Information

### INPUT, OUTPUT and SIGNAL CONNECTORS:

#### CON1 M3 Screw terminals, 7.62mm pitch

- PIN 1) GND
- PIN 2) AC NEUTRAL
- PIN 3) AC LINE

#### CON2 M3 Screw terminals, 7.62mm pitch

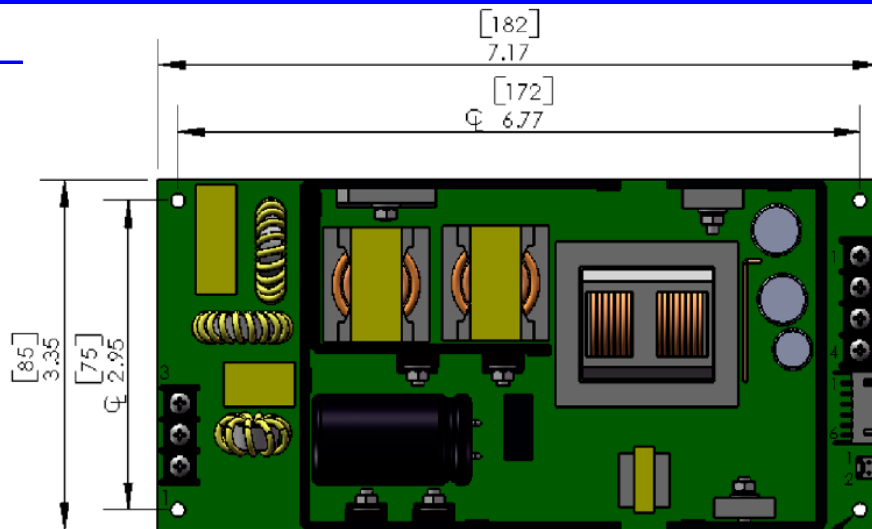
- PIN 1) RTN                      PIN 3) 24V
- PIN 2) RTN                      PIN 4) 24V

#### CON3 Landwin 2502P0600T

- PIN 1) RTN                      PIN 4) DC-OK
- PIN 2) RTN                      PIN 5) AC-OK
- PIN 3) 5V SB                    PIN 6) PS-ON

#### CON4 AMP 640456-2

- PIN 1) RTN                      PIN 2) 24V for FAN



### MATING CONNECTORS:

CON1, 2: Wire Lugs - Barrier width = 6.62mm

CON3: Landwin 2500S060, PINS: 2503T012P

CON4: AMP 1375820-2, PINS: 1375913-3



MAX LEAD PROTRUSION

Tolerance: 0.02" [0.5mm]

## Output Power Derating Curve

