



**LIEN ENGINEERING, INC.**

# **UNIVERSAL MEDICAL GRADE POWER SUPPLIES**

**ADxxxW1P-389y  
EXTERNAL 45 to 70 WATT  
ADAPTER FAMILY**



## **FEATURES:**

- Auto Selecting, Full Range 90 - 260 VAC Input
- Proven High Reliability Design
- High Efficiency
- UL, CUL, TUV Approved
- On Board EMI/RFI Filtering - Meets FCC Class B
- Reliable MOS-FET design

For over 25 years, Lien Engineering, Inc. has been producing innovative Power Conversion and Enclosure Products for Large and Small Computers, Computer Peripherals, Medical, Communications, and other Industrial requirements.

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Doc. #ADxxxW1P-389y R-11042003

# SPECIFICATIONS

## INPUT

INPUT VOLTAGE: 90VAC to 265VAC  
47 - 63 Hz

No external jumpers or switching required  
Input over-voltage/surge protection.

INRUSH CURRENT: 100A max. @ 115VAC  
200A max. @ 264VAC  
Cold start

INPUT CURRENT: 2.2A RMS Max @ 90VAC

EFFICIENCY:  $\geq 85\%$  Typical at full load

AGENCY APPROVALS: cULus 2601, EN60601

LOAD REGULATION:  $\pm 5\%$  Maximum

PROTECTION:

Over Current - set at 110% to 150% of  
rated output with automatic recovery

Over Voltage - set at 110% to 150% of  
rated output

Continuous short circuit protection  
with automatic recovery

Thermal - prevents catastrophic failure  
from overheating

ESD Protection to EN61000-4-2,  
Level 4, 1995

## OUTPUT

OUTPUT RATINGS: see below

RIPPLE & NOISE: 1% Peak to peak

ADJUSTMENT RANGE:  $\pm 10\%$  Rated output

NOISE: 1% p-p maximum

HOLD-UP TIME: 16ms minimum at full load  
and 115VAC nominal line

LINE REGULATION:  $\pm 1\%$  Maximum

## ENVIRONMENTAL

OPERATING TEMPERATURE:  $0^{\circ}\text{C}$  to  $40^{\circ}\text{C}$

STORAGE TEMPERATURE:  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$

THERMAL REGULATION: Passive convection

MTBF: 100,000 hours at  $25^{\circ}\text{C}$  and full load.

DIMENSIONS: 4.70" x 2.44" x 1.40"

MODEL	OUTPUT (W)	OUTPUT RANGE (VDC)	MAXIMUM CURRENT RANGE (A)
AD70W1P-388A	70	12 - 24	5.83 to 2.91
AD60W1P-388B	60		5.00 to 2.50
AD45W1P-388C	45		3.750 to 1.875

