

# EASYMOD AD-070U

## AC INPUT / ITE APPROVED 70 WATT POWER PLATFORM

5.00 x 3.00 x 1.00" | 125.0 x 76.2 x 25.4mm



### DESCRIPTION

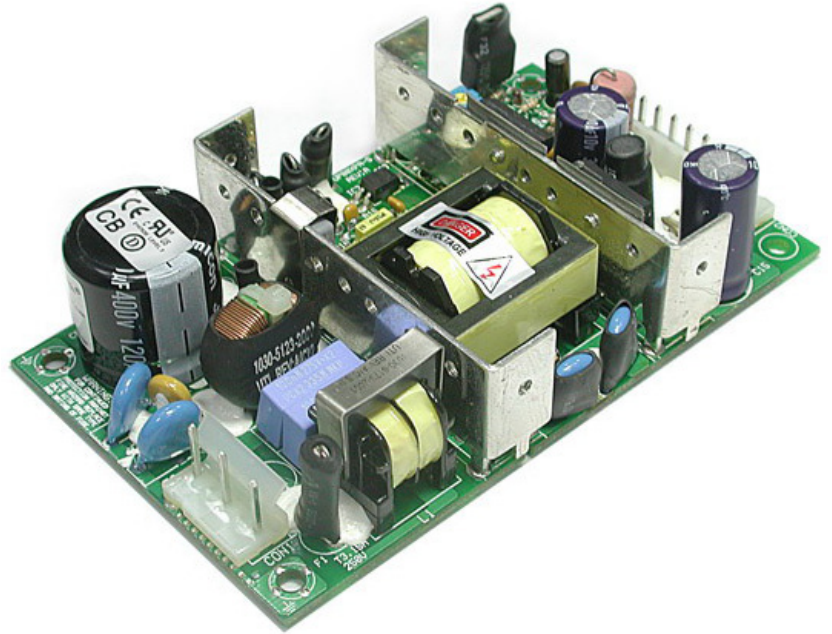
UNIPOWER's **AD-070U SERIES** is a 70 Watt Power Supply platform with both standard and configurable models featuring output voltage(s) that can be quickly configured to order while maintaining all international safety approvals.

These power supplies are available with Universal AC Input and single or quad output configurations ranging from 1.5 to 48 VDC. The AD-070U feature an industry-standard footprint, international safety approvals, Class B emissions; and -20 ~ +70°C operation (see derating).

**EASYMOD UPGRADES** include a multitude of output voltage configurations, optional covers (with or without fan), extended temperature operating range, isolated outputs, DC inputs, attached wire harnesses and much, much more. All these modifications are available without any impact on safety approvals to reduce both development cost and time to market.

### FEATURES

- ◆ Universal AC Input Range (90-264 VAC)
- ◆ Industry-Standard 3" x 5" Footprint
- ◆ 1 or 4 Outputs configurable from 1.5~48VDC
- ◆ International Safety Approvals
- ◆ >250k Hours MTBF (MIL-217F)
- ◆ Optional -40°C Guaranteed Start-Up



**Contact Unipower to discuss  
your application and define  
the right part number for your  
specific application.**

### TWO-YEAR WARRANTY

### INTERNATIONAL STANDARDS

UL/cUL 60950-1  
DEMKO EN60950-1  
CB Report, IEC60950-1  
CE Mark (LVD)

## FLEXIBLE OUTPUT CONFIGURATION GUIDELINES

with 90-264 VAC Input and -20-50°C Operation

### Single Output Capabilities

OUTPUT CURRENT	1.5~3.3V	5V	12V	15V	24V	48V
MINIMUM	0A	0A	0A	0A	0A	0A
CONVECTION <sup>(3)</sup>	10A	10A	4.2A	3.3A	2.1A	1.1A
15 CFM AIR <sup>(4)</sup>	14A	14A	5.9A	4.6A	3.0A	1.4A
PEAK <sup>(5)</sup>	15A	15A	6.5A	5.0A	3.5A	1.5A

### Multiple Output Capabilities

OUTPUT	DC OUTPUT	MIN	CON <sup>(3)</sup>	AIR <sup>(4)</sup>	PEAK <sup>(4, 5)</sup>
V1	1.5 ~ 48V <sup>(7)</sup>	0.80A <sup>(2,13)</sup>	8.0A	12.0A	13.0A
V2	1.5 ~ 48V <sup>(8)</sup>	0.40A <sup>(2,13)</sup>	4.0A	5.0A	6.0A
V3	1.5 ~ 48V <sup>(8)</sup>	0.40A <sup>(2,13)</sup>	4.0A	5.0A	6.0A
V4	1.5 ~ 48V <sup>(8)</sup>	0.20A <sup>(2,13)</sup>	2.0A	2.5A	3.0A

- (1)...Full power out on V3-V4 with minimal V1 and V2 loading—Option.  
 (2)...10% minimum load for stated regulation on multiple O/P units.  
 (3)...Convection cooling.  
 (4)...15 CFM forced air cooling, conditions.  
 (5)...30 seconds maximum duration.  
 (6)...Most output combinations from 1.5 to 48 Volts possible; up to maximum rated Current / Power...Consult UNIPOWER.

- (7)...Specify 0.1V increments.  
 (8)...Specific output voltage is current dependent.  
 (9)...Regulation may degrade under some output Consult UNIPOWER.  
 (10)...Consult UNIPOWER for Model #.  
 (11)...For outputs >48 Volts, consult UNIPOWER.  
 (12)...Cover and custom sheet metal available.  
 (13)...10% minimum of marked rating.

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## STOCKED / OFF-THE-SHELF MODELS

Listed below are common configurations stocked by UNIPOWER for immediate delivery.

### Single Output Models

MODEL	V1	MIN	CON	AIR	PEAK
AD-070U-S1-STD	5V	0A	10.0A	14.0A	15.0A
AD-070U-S2-STD	12V	0A	4.2A	5.9A	6.5A
AD-070U-S4-STD	24V	0A	2.1A	3.0A	3.5A
AD-070U-S5-STD	48V	0A	1.1A	1.4A	1.5A

### Quad Output Models

MODEL	V1	MIN	CON	AIR	V2	MIN	CON	AIR	V3	MIN	MAX	V4	MIN	MAX
AD-070U-Q1221-STD	+5V	0.4A	4A	7A	+12V	0.2A	2A	3A	-12V	0.2A	2A	-5V	0.2A	2A
AD-070U-Q1331-STD	+5V	0.4A	4A	7A	+15V	0.2A	2A	3A	-15V	0.2A	2A	-5V	0.2A	2A
AD-070U-Q1224-STD	+5V	0.4A	4A	7A	+12V	0.2A	2A	3A	-12V	0.2A	2A	+24V	0.2A	1.5A
AD-070U-Q1334-STD	+5V	0.4A	4A	7A	+15V	0.2A	2A	3A	-15V	0.2A	2A	+24V	0.2A	1A
AD-070U-Q0122-STD	+3.3V	0.4A	4A	7A	+5V	0.2A	2A	3A	+12V	0.2A	2A	-12V	0.2A	2A
AD-070U-Q0133-STD	+3.3V	0.4A	4A	7A	+5V	0.2A	2A	3A	+15V	0.2A	2A	-15V	0.2A	2A
AD-070U-Q0124-STD	+3.3V	0.4A	4A	7A	+5V	0.2A	2A	3A	+12V	0.2A	2A	+24V	0.2A	1.5A

- MIN** = Minimum Load Required for specified regulation  
**CON** = Maximum continuous output current with Convection Cooled Operation (Total power not to exceed 50 Watts continuous)  
**AIR** = Maximum continuous output current with 15 CFM Airflow Operation (Total power not to exceed 70 Watts continuous)

# SPECIFICATIONS

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

## INPUT

Input Voltage Range.....	90-264 VAC
Frequency.....	47-63Hz
Power Factor.....	EN61000-3-2 Amendment 14 Compliant
Inrush Current.....	35A Max (cold start)
Input Current @ 115VAC.....	2.5A max
Fusing.....	3.15A / 250VAC

## OUTPUT

Output Power.....	50W Convection / 70W with 15 CFM Airflow
Hold-up Time.....	16mSec
Efficiency.....	70% Typical
Adjustment Range (V1 Only).....	±5%
Ripple / Noise, max.....	1% pk-pk max
Line Regulation.....	Max ±0.2%
Load Regulation @ 60% ±40% Full Load	
V1.....	±3% max
V2-V3.....	±5% max
Cross Regulation @ 60% ± 40% Full Load	
V1: Change in V2 - V3.....	±0.5%
V2 - V4: Change in V1 @75 ±25% F/L.....	±5% max
Overvoltage Protection (V1 Only).....	>125% (Latch Off)
Power Limit.....	>120% (Auto-Recovery)
Overshoot (all outputs).....	10% max
Response Time.....	500 µSec (25-75% step load)
Switching Frequency.....	60KHz (typical)

## ENVIRONMENTAL

Operating Temp. Range.....	-20°C to +50°C (Full Load)
	Consult factory for -40°C Guaranteed Start-Up and Industrial Temperature Range options
Output Current Derating.....	2.5%/°C, 50°C to 70°C
Storage Temp. Range.....	-40°C to + 85°C
Humidity.....	5% to 95%, Non-Condensing
MTBF, 25°C (MIL217F).....	>250,000 Hours
Cooling.....	15 CFM Airflow for Full Power
Immunity.....	EN61000-4-2; -3; -4; -5; -6; -8; -11
Altitude.....	10,000 feet

## PHYSICAL SPECIFICATIONS

Case Dimensions.....	5.00 x 3.00 x 1.00" / 127 x 76.2 X 25.4mm
Weight.....	0.6 lbs. (0.27 kg.)
Vibration from 10 - 55Hz.....	1.0G Peak
	(3 orthogonal axes @ 1 octave/min, 5 minute dwell @ 4 major resonances)

## SAFETY STANDARDS

UL60950-1, CB REPORT (IEC 60950-1), CE MARK (LVD)

## EMI STANDARDS

FCC Class B & VDE Class B, CISPR 22; EN 55022 Class B

# OUTLINE DRAWING

## CONNECTOR 1

(MOLEX#09-65-2058 OR EQUIVALENT; MATING CONNECTOR= MOLEX#09-50-3051)

PIN1.....	GROUND
PIN2.....	KEY
PIN3.....	NEUTRAL
PIN4.....	KEY
PIN5.....	LINE

## CONNECTOR 2 (single output)

(MOLEX#09-65-2088 OR EQUIVALENT; MATING CONNECTOR= MOLEX#09-50-3081)

PIN1.....	V1
PIN2.....	V1
PIN3.....	V1
PIN4.....	RET
PIN5.....	RET
PIN6.....	RET
PIN7.....	NC
PIN8.....	NC

## CONNECTOR 2 (multi-output)

(MOLEX#09-65-2088 OR EQUIVALENT; MATING CONNECTOR= MOLEX#09-50-3081)

PIN1.....	V2
PIN2.....	V1
PIN3.....	V1
PIN4.....	RET
PIN5.....	RET
PIN6.....	V3
PIN7.....	V4
PIN8.....	V4 RET

