

## EASYMOD AL-070UM SERIES MEDICAL SWITCHERS

70 watts - 3" x 5" x 1" - Single to Triple Output

IF WHAT YOU WANT IS WHAT YOU NEVER GET IN UL 2601 / EN601 MEDICAL APPROVED SWITCHERS, the POWER SOLUTION for up to 70 watts steady state of high reliability, Universal AC input power can be found in the AL-70UM MEDIMOD family of 3" x 5" PC Card EASYMOD switchers. These models are available as standard in a complete range of single to triple output configurations from 1.5 to >48 VDC. Most models deliver 70W (75W peak) of highly regulated output power. This family has on-board Class B EMI filtering, is EN61000-3-2 compliant, MEDICALLY APPROVED, CE certified and delivers continuous full power output to 50°C, and is capable of operation up to 70°C. EASYMOD simply means: IF WHAT YOU SEE IS WHAT YOU DON'T WANT, IT CAN BE EASILY CHANGED. EASYMODS include; extended temperature operating range, isolated outputs, unique output combinations, available DC inputs, remote sense, low noise versions, unique cables and harnesses and much, much more. All these modifications are available at nominal (if any) additional cost, and normally without any impact on safety agency approvals which reduces both development cost and time to market.

Call EASYMOD Support on (U.S.) +1-954-346-2442 or (U.K.) +44 (0)1903 768204 or email [easymod@unipower-europe.com](mailto:easymod@unipower-europe.com).



### INPUT SPECIFICATION

Input Voltage	47-63 Hz; 90-264 VAC
Power Factor	Meets EN61000-3-2 Amendment 14
Inrush Current; 115VAC	30A P - P
Input Current	1.5A
Fusing	2A @ 250 VAC On Board
Leakage Current	< 100µA

### OUTPUT SPECIFICATION

Continuous Output Power <sup>5</sup>	70 Watts
Line Regulation Over Input Range; V1-V3	± 0.2%
Load Regulation @ 60% 40% Full Load	
V1 - V2	± 3%
V3 - V3	± 5% max
Cross Regulation @ 60% 40% Full Load	
V1: Change in V2-V3	± 0.5%
V2-V3: Change in V1 @75 25% F/L	± 5% max
Overvoltage Protection V1	130% Vout typ
Overshoot, All Outputs	10% max
Power Limit	Set @120% typ
Response Time <sup>1</sup>	500 µSec
Ripple & Noise <sup>3</sup> @ 20 Mhz Band Width ; Full Load	
All Outputs	1% P-P max
Output Adjustment Range on V1	5% min

### FEATURES & OPTIONS

- EN61000-3-2 COMPLIANT
- REMOTE SENSE AVAILABLE
- 1.5 -48 VDC OUTPUTS
- UP TO 4 REGULATED OUTPUTS
- CB REPORT AVAILABLE
- 3" X 5" X 1.2" FOOTPRINT
- < 90 µA LEAKAGE CURRENT
- 40°C START-UP - OPTION
- 24 or 48 VDC INPUT AVAILABLE

### GENERAL SPECIFICATION

Efficiency	75% typ
Switching Frequency	60KHz typ
Immunity	See Note 6 Below
Operating Temperature Range <sup>3</sup>	-20 to +70°C
Minimum Start-up Temperature <sup>7</sup>	-20°C
Derating from 50-70°C	2.5%/°C
Storage Temperature	-40 to +85°C
Cooling	See Note 5
Relative Humidity; Non-Condensing	5 - 95%
Altitude	10,000 ft
EMI	FCC Class B & VDE Class B
	..... CISPR 22; EN 55022 Class B; EN55024
Vibration <sup>4</sup> from 10-55Hz	1.0G Peak
MTBF per MIL 217	> 250,000 hours
Safety Agency Approvals	UL & cUL 1950 & 2601;
	..... EN 60950; IEC 601-1; CE

#### Notes :

1. All outputs return within 1% of nominal for load change from 25-75% lo excursion.
2. See override for steady state and peak ratings for convection and forced air.
3. Ripple & noise may not meet published specifications for 2 min. after start-up below 0°C.
4. Three orthogonal axes @ 1 octave/min. 5 min. dwell @ four major resonances.
5. Rating with 30 CFM air; Rated at 50 watts convection.
6. Meets EN61000-4 -2; -3; -4; -5; -6; -8; -11 Level 3
7. -40°C start up option available
8. All specifications typical at nominal line, full load & 25°C, and are subject to change without notice.

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[www.unipowercorp.com](http://www.unipowercorp.com) or [www.powercassette.com](http://www.powercassette.com)

# EASYMOD AL-070UM FAMILY

## AVAILABLE STEADY STATE CURRENT <sup>1</sup> @ 50°C AMBIENT

### MULTIPLE OUTPUT MODELS / OUTPUT CURRENT / AMPS

OUTPUT	DC OUTPUT <sup>1</sup>	MINIMUM	MAXIMUM <sup>3</sup>	MAXIMUM <sup>4</sup>	PEAK <sup>4,5</sup>
V1	1.5 to 48 <sup>7</sup> V	0.5 <sup>2</sup>	8	9	10
V2	1.5 to 48 <sup>8</sup> V	0.5 <sup>2</sup>	4	4	5
V3	1.5 to 48 <sup>8</sup> V	0.2 <sup>2</sup>	2	2.5	2.5

### SINGLE OUTPUT MODELS (1.5 to 48VDC <sup>7,11</sup>) / OUTPUT CURRENT / AMPS

OUTPUT CURRENT	1.5V ~ 3.3V	5V	12V	15V	24V	48V
MINIMUM	0	0	0	0	0	0
MAXIMUM <sup>3</sup>	12	12	5	4	2.5	1.25
MAXIMUM <sup>4</sup>	14	14	5.9	4.6	3	1.4
PEAK <sup>4,5</sup>	15	15	6.5	5	3	1.5

- (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) 30CFM forced air cooling.  
 (5) 30 seconds maximum duration.  
 (6) Most output combinations from 2 to 48+ Volts possible; up to maximum rated Current / Power...Consult EASYMOD Support.

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

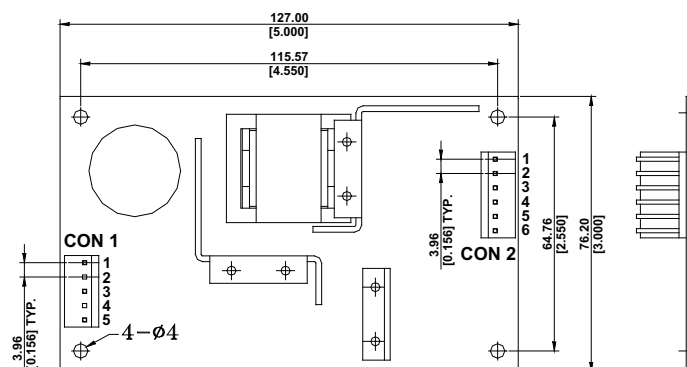
## MECHANICAL

CON 1:  
 Molex 09-65 2058  
 Mating: Molex 09-50-3051

PIN1 GROUND  
 PIN2 KEY  
 PIN3 NEUTRAL  
 PIN4 KEY  
 PIN5 LINE

CON 2:  
 Molex 09-65-2068  
 Mating: Molex 09-50-3061

PIN1 V2  
 PIN2-PIN3 V1  
 PIN4-PIN5 RET  
 PIN6 V3



TOLERANCE:  $\frac{\text{mm} \pm 0.5}{[\text{inch}] \pm 0.02}$

UNIT:  $\frac{\text{mm}}{[\text{inch}]}$