

EASYMOD AL-070D SERIES DC INPUT SWITCHERS

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

IF WHAT YOU WANT IS WHAT YOU NEVER GET IN DC INPUT SWITCHERS, the POWER SOLUTION for up to 70 watts steady state of high reliability, nominal 24 or 48 VDC input power can be found in the AL-70D 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, 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 AC 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. An EASYMOD can be performed on supplies for programs requiring as few as 250 units.

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



INPUT SPECIFICATION

Input Voltage	.....	18 - 36 or 36 - 72 VDC
Input Current	48VDC.....	3A
	24VDC.....	5A
Fusing	.....	4A @ 48VDC On Board
	.....	6.3A @ 24VDC On Board

OUTPUT SPECIFICATION

Continuous Output Power ⁵	.....	70 Watts
Line Regulation Over Input Range; V1-V3	.....	± 0.2%
Load Regulation @ 60% 0% Full Load		
V1 - V2	.....	± 3%
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 ¹	.....	500 µSec
Ripple & Noise ³ @ 20 Mhz Band Width ; Full Load		
All Outputs	.....	1% P-P max
Output Adjustment Range on V1	.....	5% min

FEATURES & OPTIONS

- V1 & V2 REGULATED
- FULL Pout @ MINIMAL V1 LOAD
- 1.5 -48 VDC OUTPUTS
- 2 : 1 & 4 : 1 INPUT RANGES
- CB REPORT AVAILABLE
- UL- cUL; EN60950 APPROVALS
- UL-2601; IEC 601- AVAILABLE
- 40°C START-UP - OPTION
- 12 VDC INPUT AVAILABLE

GENERAL SPECIFICATION

Efficiency	48VDC Input.....	75% typ
Switching Frequency	.....	60KHz typ
Susceptibility	.....	See Note 6 Below
Operating Temperature Range ³	.....	-20 to +70°C
Minimum Start-up Temperature ⁷	.....	-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
MTBF per MIL 217	.....	> 200,000 hours
Vibration ⁴ from 10-55Hz	.....	1.0G Peak
Safety Agency Approvals: ...		UL & cUL 60950 ; EN 60950; 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. Rated with 30 CFM air. Rated at 50 watts convection. Derate by 15% for 24VDC input
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.

EASYMOD is a Sales Mark of Power Solutions Inc.

www.unipowercorp.com or www.powercassette.com

EASYMOD AL-070D FAMILY

AVAILABLE STEADY STATE CURRENT ¹ @ 50°C AMBIENT

MULTIPLE OUTPUT MODELS / OUTPUT CURRENT / AMPS

OUTPUT	DC OUTPUT ¹	MINIMUM	MAXIMUM ³	MAXIMUM ⁴	PEAK ^{4,5}
V1	1.5 to 48 ⁷ V	0.5 ²	8	9	10
V2	1.5 to 48 ⁸ V	0.5 ²	4	4	5
V3	1.5 to 48 ⁸ V	0.2 ²	2	2.5	2.5

SINGLE OUTPUT MODELS (1.5 to 48VDC ^{7,11}) / OUTPUT CURRENT / AMPS

OUTPUT CURRENT	1.5V ~ 3.3V	5V	12V	15V	24V	48V
MINIMUM	0	0	0	0	0	0
MAXIMUM ³	12	12	5	4	2.5	1.25
MAXIMUM ⁴	14	14	5.9	4.6	3	1.4
PEAK ⁵	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.

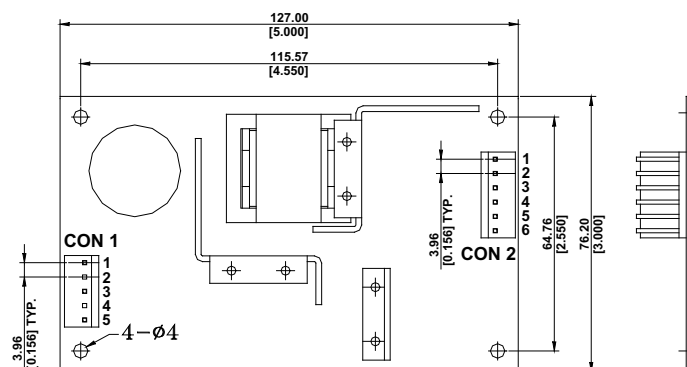
MECHANICAL

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

PIN1 GROUND
 PIN2 -V IN
 PIN3 -V IN
 PIN4 +V IN
 PIN5 +V IN

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