MEDIMOD® AL-085UM

AC INPUT / MEDICAL APPROVED
85 WATT MEDICAL POWER PLATFORM

5.00 x 3.00 x 1.20" | 127.0 x 76.2 x 30.48mm

DESCRIPTION

UNIPOWER's MEDIMOD® AL-085UM SERIES is an 85 Watt Medical 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 AL-085UM features an industry-standard footprint, medical safety approvals, Class B emissions; and -20 ~ +70°C operation (see derating).

MEDIMOD® UPGRADES include a multitude of output voltage configurations, extended temperature operating range, isolated outputs, 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
- Medical Safety Approvals
- >500k Hours MTBF, Demonstrated
- Optional -40°C Guaranteed Start-Up
- Double Sided PC Board

Contact UNIPOWER to discuss your application and define the right part number for your specific application:

Tel: +1-954-905-1070
Email: the.power.solution@unipowerco.com

For the DC input version see DCMOD AL-085D datasheet

For the ITE Approved version see EASYMOD AL-085U datasheet

FIVE YEAR WARRANTY

INTERNATIONAL STANDARDS

UL/cUL 60601-1 3rd Ed.
EN60601-1 3rd Ed.
CB Report, IEC60601-1
CE Mark (LVD)

"IF WHAT YOU SEE IS WHAT YOU DON'T WANT, IT CAN EASILY BE CHANGED." The MEDIMOD® family of switching power supplies has been designed with two precepts; (1) the laws of physics are immutable, and (2) the satisfaction of customer requirements and needs is paramount.

A host of modifications, only some of which are listed below, can and will be performed on products for customer programs requiring as few as 250 units per year. These "mods" are available at nominal premium (if any), normally without non-recurring engineering costs (although a one time documentation fee may be incurred), and usually with all safety agency approvals in place. This minimizes both product development cost and new product time to market. Effectively, MEDIMODs® allow small program requirements the luxury of costly custom power supply designs.

TYPICAL MODIFICATIONS

- Unique Output Combinations from 1.5 to >48 volts
- Isolated Outputs
- Low Output Ripple and Noise
- Extended Temperature Operating Range
- -40°C Start-Up
- Zero Load Operation

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 (3)	13A	13A	5.4A	4.3A	2.7A	1.4A
15 CFM AIR (4)	17A	17A	7.1A	5.7A	3.5A	1.8A
PEAK (5)	19.5A	19.5A	8.1A	6.5A	4.0A	2.0A

Multiple Output Capabilities

OUTPUT	DC OUTPUT	MIN	CON (3)	AIR (4)	PEAK (4, 5)
V1	1.5 ~ 48V (7)	1.3A (2, 13)	13A	17A	19.5A
V2	1.5 ~ 48V (8)	0.6A (2, 13)	6A	8.5A	9A
V3	1.5 ~ 48V (8)	0.3A (2, 13)	3A	5A	5.5A
V4	1.5 ~ 48V (8)	0.3A (2, 13)	3A	3.5A	4.0A

(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) 10% minimum of marked rating.

Contact UNIPOWER to discuss your application and define the right part number for your specific application:

Call: +1-954-905-1070 • Email: the.power.solution@unipowerco.com

For the DC input version see DCMOD AL-085D datasheet | For the ITE Approved version see EASYMOD AL-085U datasheet.

SPECIFICATIONS

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

INPUT

Input Voltage Range Options	90-264 VAC
Frequency	47-63Hz
Power Factor	EN61000-3-2 Compliant
Inrush Current	35A Max (cold start)
Input Current @ 90VAC	2.5A max
Fusing, dual fuse	3.15A / 250VAC
Leakage Current	100µA max @ 264VAC

OUTPUT

Output Power	65W Convection / 85W with 15 cfm Airflow
Hold-up Time	16mSec
Efficiency	75% 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-V4	±5% max
Cross Regulation @ 60% ± 40% Full Load	
V1: Change in V2 - V4	±0.5%
V2 - V4: Change in V1 @75 ±25% F/L	±5% max
Overvoltage Protection (V1 Only)	>130% (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, Demonstrated	>500,000 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 1.20" / 127 x 76.2 x 30.48mm
Weight	0.75 lbs. (0.34 kg.)
Vibration from 10 - 55Hz	1.0G Peak

(3 orthogonal axes @ 1 octave/min, 5 minute dwell @ 4 major resonances)

SAFETY STANDARDS

UL/cUL 60601-1 3rd Ed., EN60601-1 3rd Ed., CB REPORT (IEC 60601-1), CE MARK (LVD)

EMI STANDARDS

FCC Class B & VDE Class B, CISPR 11; EN 55011 Class B (Class B optional, consult factory)

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)

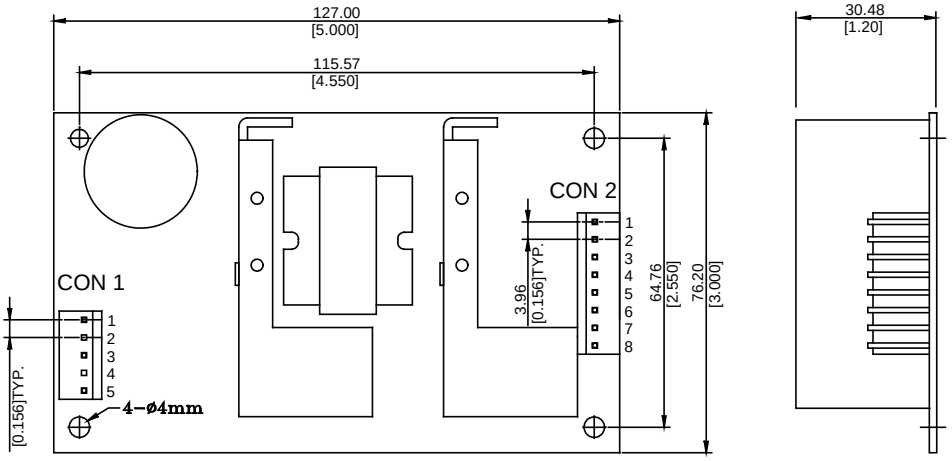
(MOLEX#09-65-2088 OR EQUIVALENT; MATING CONNETOR= MOLEX#09-50-3081)

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

CONNECTOR 2 (multi-output)

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

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



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