MEDIMOD® AM-120UM

AC INPUT / MEDICAL APPROVED
120 WATT POWER PLATFORM

5.0 x 3.3 x 1.5" | 127 x 83.8 x 38.1mm

DESCRIPTION

UNIPOWER's MEDIMOD® AM-120UM is a 120 Watt Power Supply platform with output voltage(s) that are quickly configured to order with medical safety approvals.

These power supplies are available in a complete range of single to quad output configurations from 1.5 to >48 VDC. Delivering 120 (135 peak) watts of highly regulated output power, the AM-120UM offers Class B emissions, is CE marked, complies to EN61000-3-2, delivers continuous full power output to 50°C, and is capable of operation up to 70°C.

MEDIMOD® UPGRADES include a multitude of output voltage configurations, optional covers (with or without fan), 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 - meets EN61000-3-2
- UL-60601 3rd Edition Listed
- Small 3.3 x 5.0 x 1.5" U-Frame Package
- 1~4 Outputs configurable from 1.5~48VDC
- Remote Sense Option (V1 Only)
- Optional Overtemperature Protection
- >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 AM-120D datasheet

For the ITE Approved version see EASYMOD AM-120U 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
- Power Fail / Power Good Signals
- Enable / Inhibit
- Isolated Outputs
- Low Output Ripple and Noise
- Cover & Fan Assembly
- Extended Temperature Operating Range
- -40°C Start-Up
- Zero Load Operation
- Remote Sense
- Remote On / Off

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)	18A	18A	7.5A	6A	3.76A	1.87A
30 CFM AIR (4)	24A	24A	10A	8A	5A	2.5A
PEAK (5)	27A	27A	11A	9A	7A	3A

Multiple Output Capabilities

OUTPUT	DC OUTPUT	MIN	CON (3)	AIR (4)	PEAK (4, 5)
V1	1.5 ~ 48V (7)	1.8A (2, 13)	18A	24A	27A
V2	1.5 ~ 48V (8)	0.5A (2, 13)	5A	6A	8A
V3	1.5 ~ 48V (8)	0.2A (2, 13)	1.8A	2A	3A
V4	1.5 ~ 48V (8)	0.2A (2, 13)	1.8A	2A	3A

(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) 30 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

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 Am-120D datasheet | For the ITE Approved version see EASYMOD Am-120U datasheet.

SPECIFICATIONS

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

INPUT

Voltage Range	90-264 VAC
Power Factor	EN61000-3-2 Compliant
Frequency	47-63Hz
Inrush Current Limiting, Max	35A @ 115VAC (max)
EMI Filter, Conducted	FCC Class B & VDE Class B
Fast Transients	EN61000-4-4
Surges	EN61000-4-5
Fusing, dual	3.5A / 250VAC
Leakage Current	<100µA @ 264 VAC (max)

OUTPUT

Output Power	90W Convection / 120W with 30 cfm Airflow
Efficiency	75% Typical
Adjustment Range (V1 Only)	±5% (min)
Ripple / Noise, max	1% pk-pk (max)
Line Regulation	Max ±0.2%
Load Regulation @ 60% ± 40% Full Load	V1-V2 = ±3% | V3-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)
Transient Load / Slew Rate	0.5A/µs
Holdup Time	16msec
Overvoltage Protection (V1 Only)	>130% (Latch Off)
Power Limit	>120% (Auto-Recovery)
Response Time	500 µSec (25-75% step load)

STATUS / CONTROL

Remote Sense (Option)	>250mV (V1 Only)
Power Good (Option)	TTL Compatible

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
Immunity	EN61000-4-2; -3; -4; -5; -6; -8; -11
MTBF, Demonstrated	>500,000 Hours
Cooling	30 cfm Airflow for Full Power
Immunity	EN61000-4-2; -3; -4; -5; -6; -8; -11

PHYSICAL SPECIFICATIONS

Case Dimensions	5.00 x 3.30 x 1.50" / 127 x 83.8 x 38.1mm
Weight	1.2 lbs. (0.6 kg.)
Vibration 4 from 10 - 55Hz	1.0G Peak

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 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

(MOLEX#09-65-2148 OR EQUIVALENT;
MATING CONNETOR= MOLEX#09-50-3141)

SINGLE OUTPUT MODELS

PIN 1~5	V1
PIN 6~10	RET
PIN 11~14	N/C

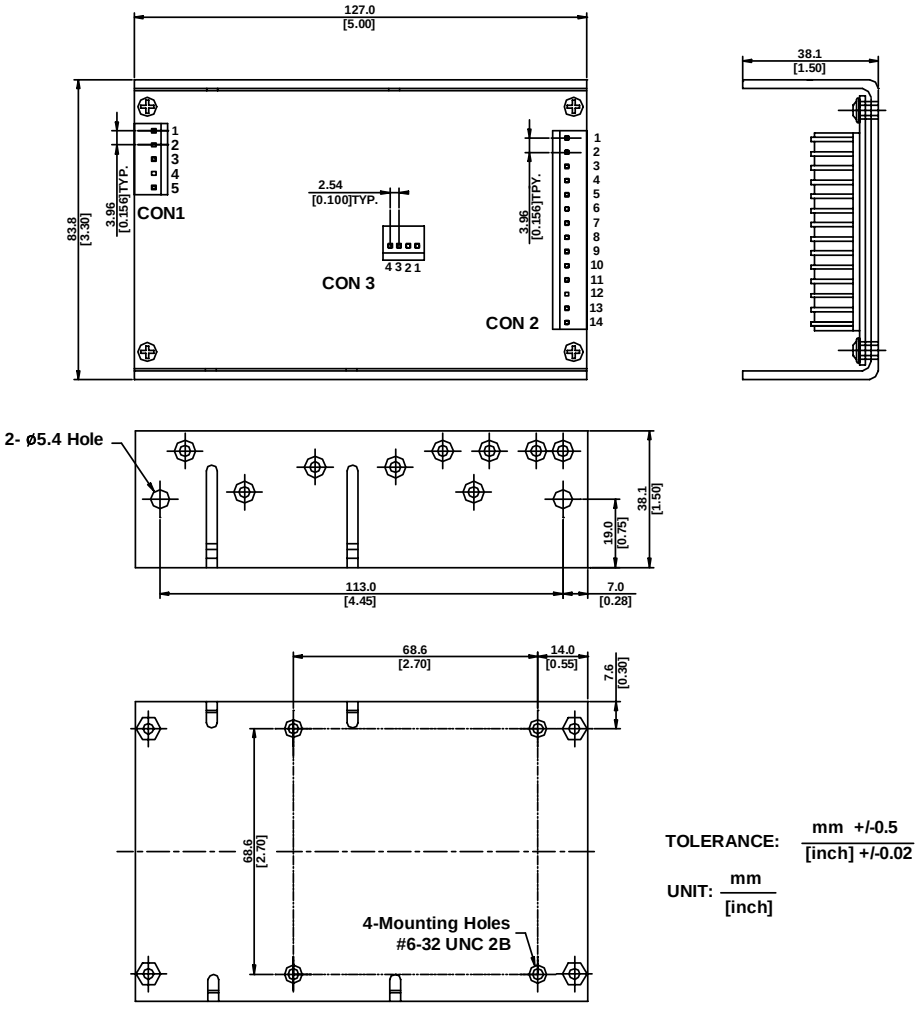
MULTIPLE OUTPUTS

PIN1~PIN3	V1
PIN4~PIN7	RET
PIN8~PIN9	V2
PIN10	NC
PIN11	V3
PIN12	KEY
PIN13	-V4
PIN14	RET or +V4

CONNECTOR 3 (OPTIONAL)

(MOLEX#22-27-2041 OR EQUIVALENT;
MATING CONNECTOR= MOLEX#22-01-3047)

PIN1	S-
PIN2	S+
PIN3	RET
PIN4	PG



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