MEDIMOD® AJ-040UM

AC INPUT / MEDICAL APPROVED 40 WATT POWER PLATFORM

3.6 x 2.5 x 1.00" | 91.44 x 63.5 x 25.4mm

DESCRIPTION

UNIPOWER's MEDIMOD® AJ-040UM SERIES is a 40 Watt Medical Approved 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 in single or triple output configurations with outputs ranging from 1.5 to 48 VDC. The AJ-040UM feature a high-density footprint; universal AC input; international 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, 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
- High-Density 3.6" x 2.5" Footprint
- 1 or 3 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 AJ-040D datasheet

For the ITE Approved version see EASYMOD AJ-040U 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
- 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)	6A	6A	2.5A	2A	1.3A	0.6A
15 CFM AIR (4)	8A	8A	3.3A	2.6A	1.7A	0.8A
PEAK (5)	9.5A	9.5A	4A	3.3A	2.1A	1A

Multiple Output Capabilities

OUTPUT	DC OUTPUT	MIN	CON (3)	AIR (4)	PEAK (4, 5)
V1	1.5 ~ 48V (7)	0.40A (2, 12)	4.0A	5.0A	6.0A
V2	1.5 ~ 48V (8)	0.10A (2, 12)	1.0A	1.2A	1.5A
V3	1.5 ~ 48V (8)	0.08A (2, 12)	0.8A	1.0A	1.2A

(1) Full power out on V3 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 AJ-040D datasheet | For the ITE Approved version see EASYMOD AJ-040M 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
Inrush Current	25A Max (cold start)
Input Current @ 115VAC	1A max
Leakage Current	<100µA @ 264VAC
Fusing, dual fuse	2A / 250VAC

OUTPUT

Output Power	30W Convection / 40W 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 - V3: 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, 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	3.60 x 2.48 x 1.00" / 91.5 x 63.0 x 25.4mm
Weight	0.38 lbs. (0.17 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 A & VDE Class A, CISPR 11; EN 55011 Class A
(Class B optional, consult factory)

OUTLINE DRAWING

CONNECTOR 1

(MOLEX#09-65-2038 OR EQUIVALENT;
MATING CONNECTOR= MOLEX#09-50-3031)

PIN1	NEUTRAL
PIN2	Key
PIN3	LIVE

CONNECTOR 2 (single output)

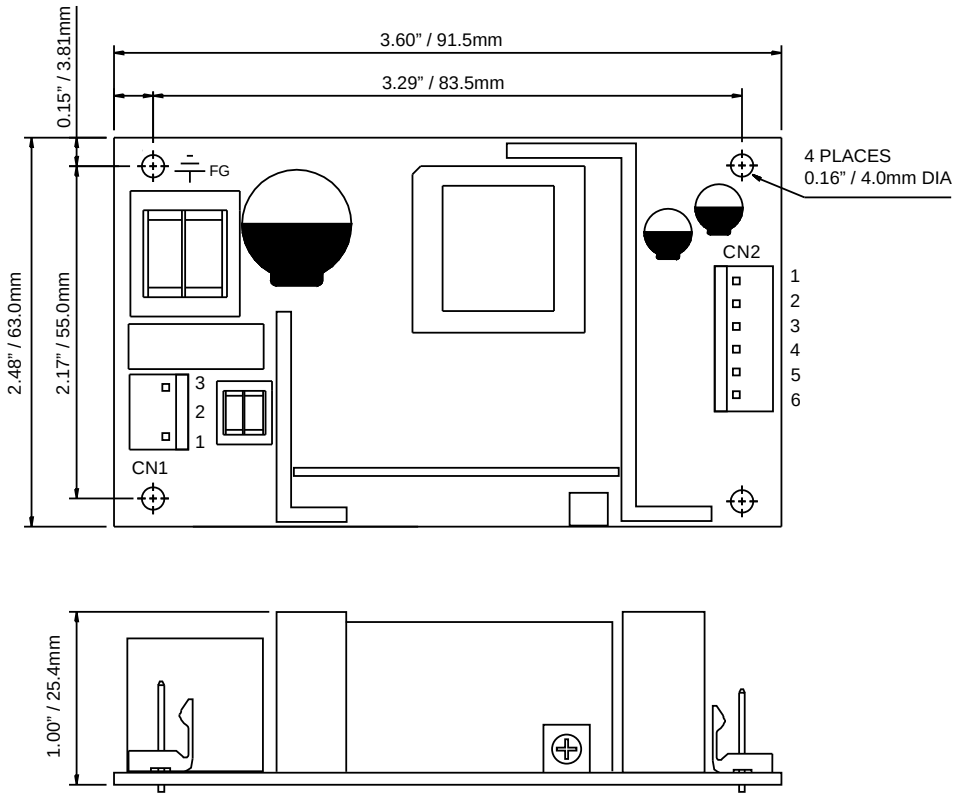
(MOLEX#09-65-2068 OR EQUIVALENT;
MATING CONNETOR= MOLEX#09-50-3061)

PIN1	NC
PIN2	RET
PIN3	RET
PIN4	V1
PIN5	V1
PIN6	NC

CONNECTOR 2 (multi-output)

(MOLEX#09-65-2068 OR EQUIVALENT;
MATING CONNETOR= MOLEX#09-50-3061)

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



North America & CALA: +1 954-346-2442 • EMEA: +1 561-990-3830 • sales@unipowerco.com