

3" x 5" x 1.4"

- 130 Watts Output Power
- Triple Outputs
- Universal 90-264VAC Input
- 5656VDC Input to Output Isolation
- Active Power Factor Correction



Model Number	Output V1/V2/V3	Output I1/I2/I3 max.	Ripple & Noise	Efficiency(min/nom)	Capacitive Load
<b>TRIPLE OUTPUT</b>					
PMMK130T-A (U)(-A)	5/12/-12 VDC	15/5/1 Amps	100/120/120mV pk-pk	75% / 80%	25,000uF to 30,000uF
PMMK130T-B (U)(-A)	5/15/-15 VDC	15/5/1 Amps	100/150/150mV pk-pk	75% / 80%	25,000uF to 30,000uF
PMMK130T-C (U)(-A)	5/24/12 VDC	4/4/2 Amps	100/240/120mV pk-pk	80% / 82%	25,000uF to 30,000uF
PMMK130T-D (U)(-A)	12/24/5 VDC	8/2/3 Amps	120/240/100mV pk-pk	80% / 82%	15,000uF to 17,600uF

- Note:
- The PMMK130 Series is offered in an optional U-Channel Chassis as well as with optional 3.96mm pitch 5 and 10 Pin Input and Output connectors (open frame construction and screw terminals are standard respectively). Simply add a "U" at the end of the Model Number to receive the U-Channel configuration or a "-A" to receive the pins, or both if both are desired. For example: The Model Number "PMMK130T-AU-A" represents a triple output (5/12/-12VDC) U-Channel supply with 3.96 pitched pins (5 Input; 10 Output) . See the Mechanical Dimensions on pages 3 through 8 in this specification
  - PMMK130T-A and all "U" options are not covered by UL Certification unless provided with more than 10 CFM forced air cooling applied 6-10cm above T1.
  - Derating curves acceptable up to 40°C for UL certified products

*All specifications are typical at nominal input, full load, and 25°C unless otherwise noted*

\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

130W Open Frame and U-Channel Medical Switchers with PFC

**PMMK130** series

**INPUT SPECIFICATIONS**

Input Voltage Range	90-264VAC (100-240VAC Nom.)
Input Frequency Range	47-63 Hz
Inrush Current, typ:	Cold Start, 60A @ 230VAC Input *
Input Current	2.3-0.8A (90-264VAC)
Power Factor (cold start)	PF > 0.96 @ 230VAC
Leakage Current	<0.3mA @ 264VAC, 50Hz

**OUTPUT SPECIFICATIONS**

Voltage and Current	See Selection Chart
Minimum Load	0.1A /10% of Max. load/ 0A
Maximum Output Power	130 Watts
Preset Accuracy (Note 6)	1%
Line Regulation (Note 5)	0.5% nom / 1% max
Load Regulation	V1: 7% (20% to Full Load) V2: 11% (10% Load) V2: 3% (0A)
Ripple/Noise (Notes 1,2,7)	See Selection Chart
Turn On	<4S, typ.
Hold Up Time / Rise Time	20mS, typ. / 30mS, typ.
Short Circuit Protection	Auto recovery *
Over Voltage Protection	130% max., Auto recovery *
Over Current Protection	150% max., Auto recovery *
Transient Response	10mS
Over Shoot/Under Shoot	<10% of Nominal O/P VDC

**GENERAL SPECIFICATIONS**

Safety	UL/cUL:	ANSI/AAMI ES60601-1 3rd ed. CSA C22.2 No. 60601-1 3rd ed.
	UL-EU:	EN60601-1 3rd ed.
	CB:	IEC60601-1 3rd ed.
	CE:	EN60601-1-2
Isolation (Note 3)		5656VDC I/P - O/P * 2828 VDC I/P - GND * 707VDC O/P - GND *
Insulation Resistance		≥ 20MΩ (500VDC, 1S I/P-O/P)
EMI		CISPR EN55011 class B
Efficiency		See Selection Chart

**ENVIRONMENTAL SPECIFICATIONS**

Oper. Temperature (Note 4)	-10°C to +70°C (See Derate Curve)
Storage Temperature	-25°C to +85°C
Relative Humidity	10 to +90%, non-cond *
EMS Harmonics:	IEC61000-3-2 Class A
Fluctuations:	IEC61000-3-3
ESD:	IEC61000-4-2, 6KV Contact, 8KV Air
RS:	IEC61000-4-3 FR: 80MHz-2.5GHz Field Strength: 3V/M
EFT:	IEC61000-4-4 2KV on AC Line
Surge:	IEC61000-4-5 1KV (L-L); 2KV (L, N-PE)
CS:	IEC61000-4-6 3V (EMF)
Dips:	IEC61000-4-11 95% 250CY, 70% 25CY, 40% 5CY, 5% 0.5CY
MTBF	175,700 min. to MIL-HDBK-217F
Vibration	4G Pk, 50~500Hz, 3 Axes, 30 min*
Drop Test	Test Height 70cm *

**PHYSICAL SPECIFICATIONS**

Size	Open Frame:	76.2 x 127 x 35.5mm (3" x 5" x 1.4")
	U-Channel:	127 x 80.4 x 38mm (5" x 3.17" x 1.50")
Weight	Open Frame:	10.46 oz (297g)
	U-Channel:	13.25 oz (376g)

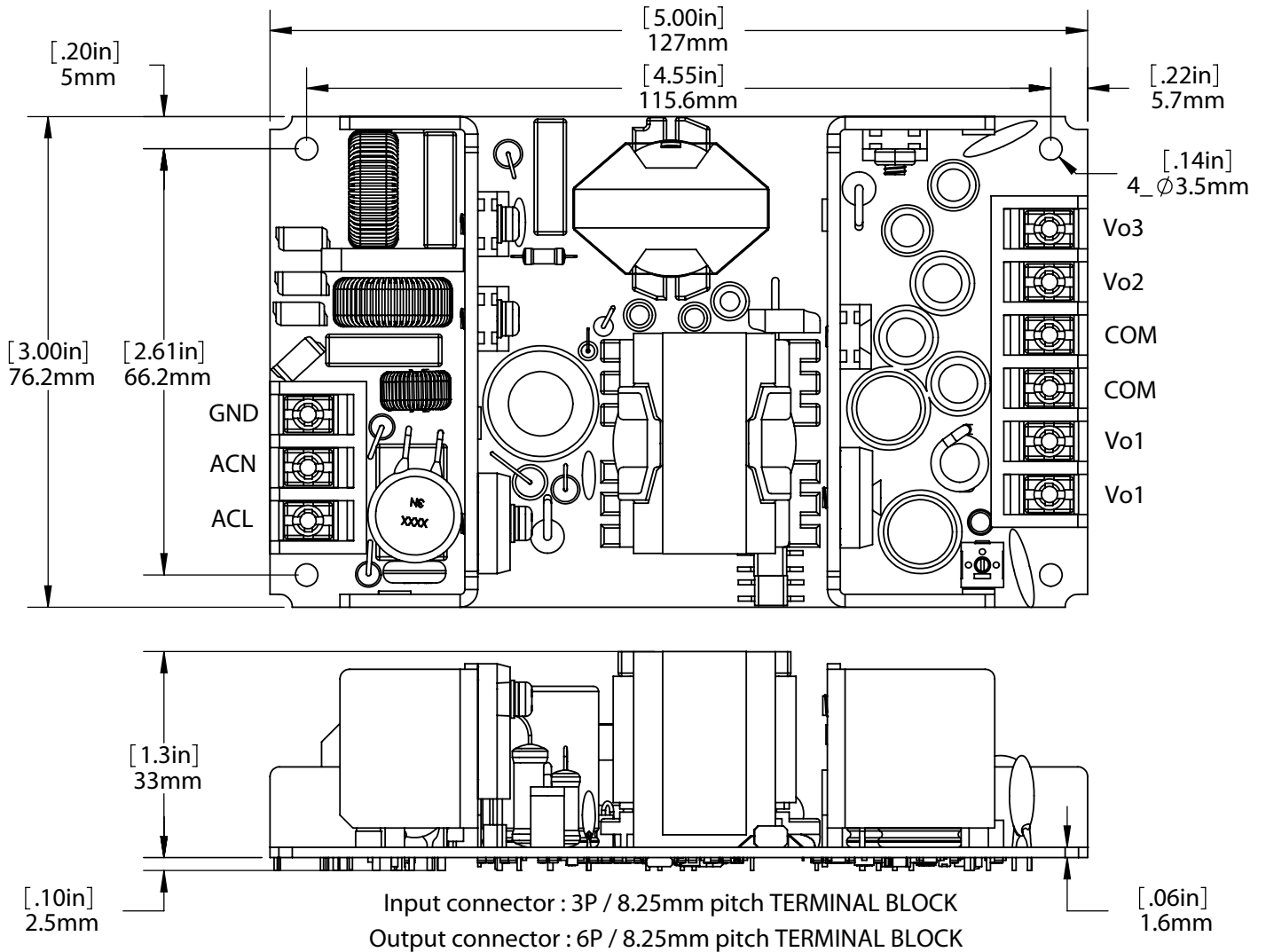
**NOTES:**

1. All measurements should be made directly at the terminals of the power supply.
2. Ripple and Noise depend upon output voltage a specified per particular model.
3. Isolation for up to 1min duration.
4. Specified for free-air convection cooling.
5. Line regulation measured from 90 - 264VAC/100VAC minimum required for full load start.
6. Preset accuracy measured at nominal load, 120VAC input.
7. O/P oise measured directly at pins/terminals @ nominal load, 0uF by pass and 47uF electrolytic, pk-pk@ 20MHz bandwidth.

**Special EMC Notice:** The end application shall provide an earth ground connection for conducted & radiated emission performance. Astrodyne is not liable for the end application without extra earth connection to PMMK130T Open Frame Power Supply.

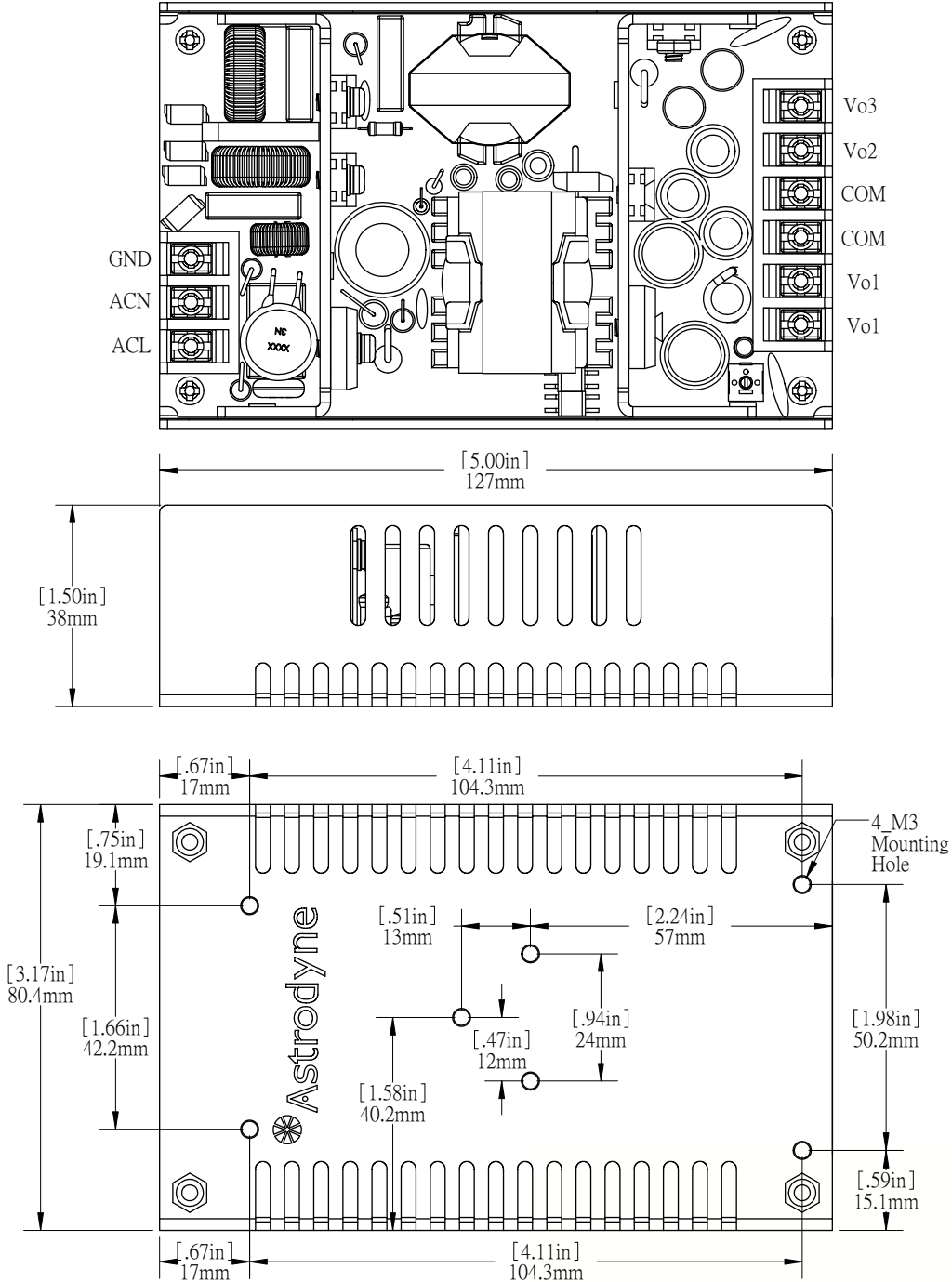
**MECHANICAL DIMENSIONS**

Open Frame (PMMK130T-xx)



Output Model	Vo1	Vo2	Vo3
A	+5V	+12V	-12V
B	+5V	+15V	-15V
C	+5V	+24V	+12V
D	+12V	+24V	+5V

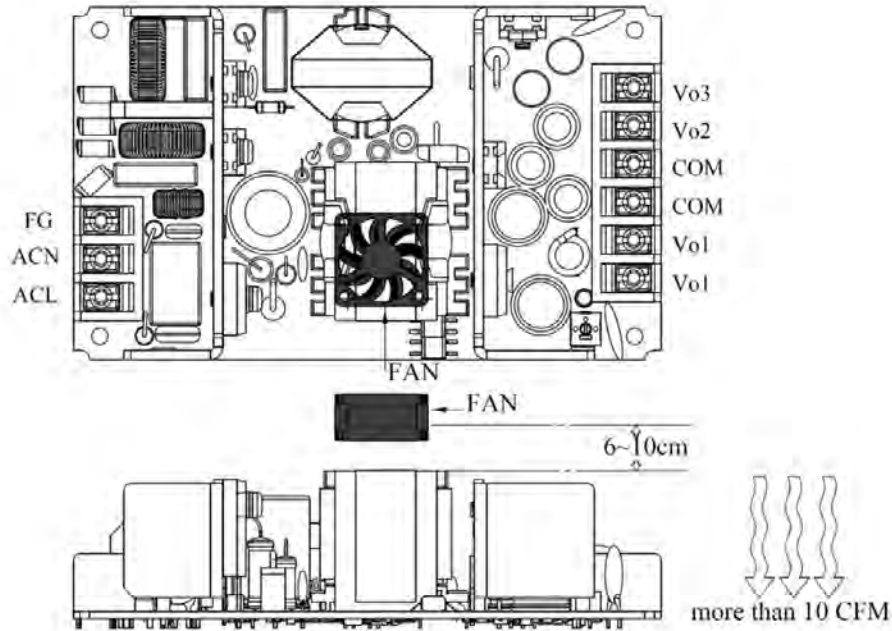
**MECHANICAL DIMENSIONS Open Frame (PMMK130T-xxU)**



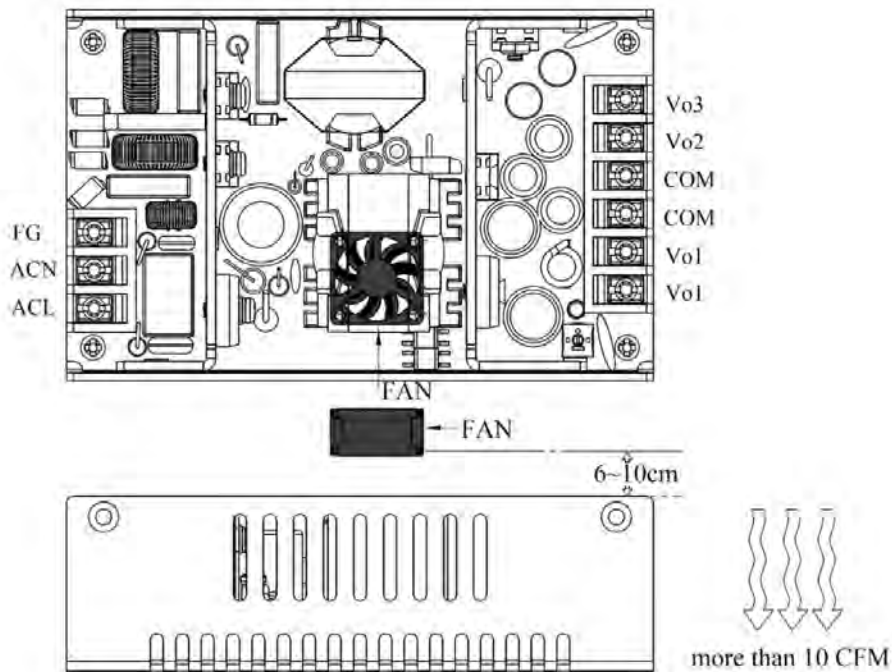
Output Model	Vo1	Vo2	Vo3
A	+5V	+12V	-12V
B	+5V	+15V	-15V
C	+5V	+24V	+12V
D	+12V	+24V	+5V

**MECHANICAL DIMENSIONS - FAN PLACEMENT RECOMMENDATION**

Open Frame (PMMK130T-xx):

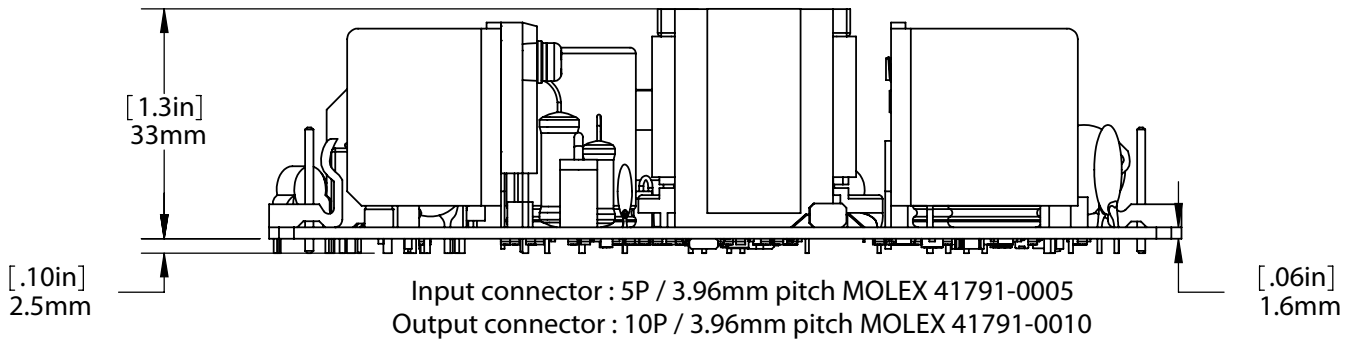
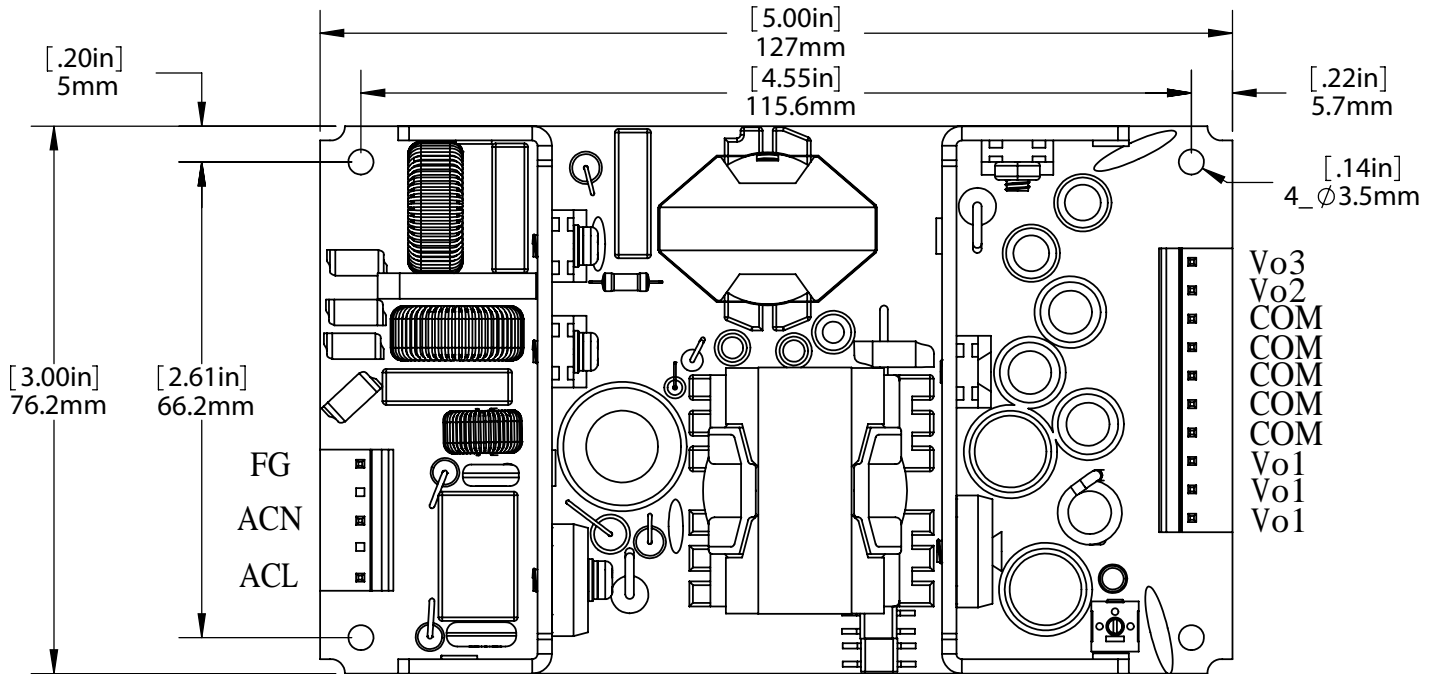


U-Bracket (PMMK130T-xxU):



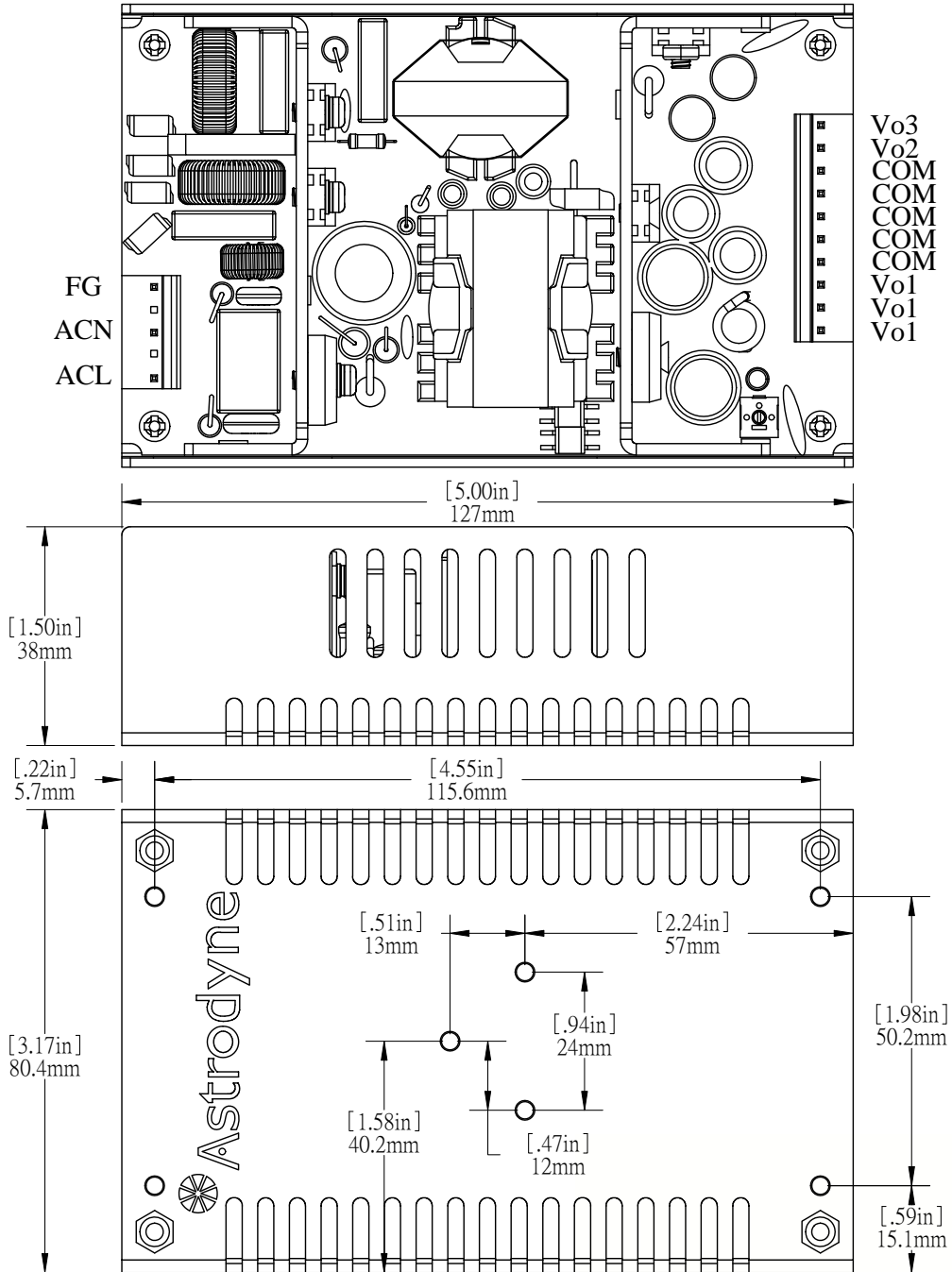
**MECHANICAL DIMENSIONS**

Open Frame (PMMK130T-xx-A)



Output Model	Vo1	Vo2	Vo3
A	+5V	+12V	-12V
B	+5V	+15V	-15V
C	+5V	+24V	+12V
D	+12V	+24V	+5V

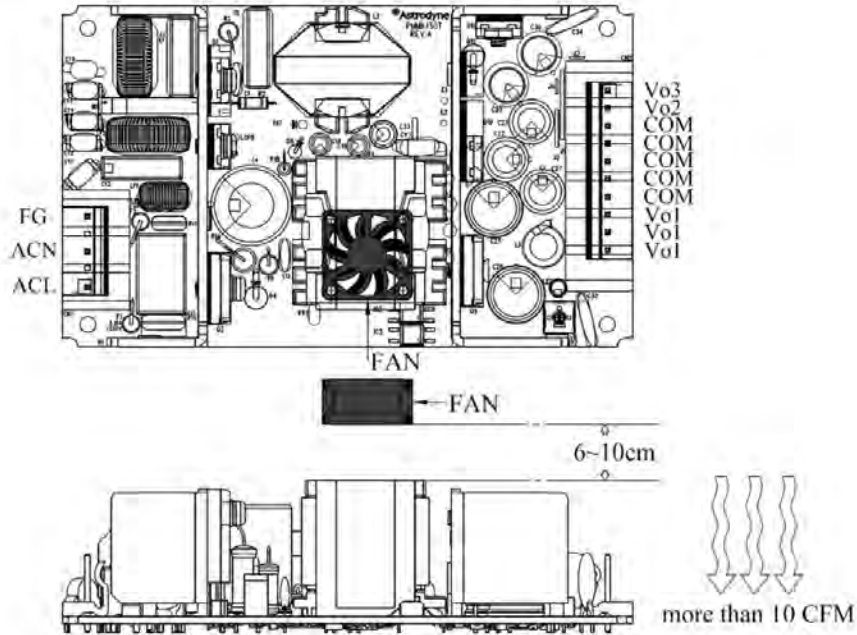
**MECHANICAL DIMENSIONS U Bracket (PMMK130T-xxU-A)**



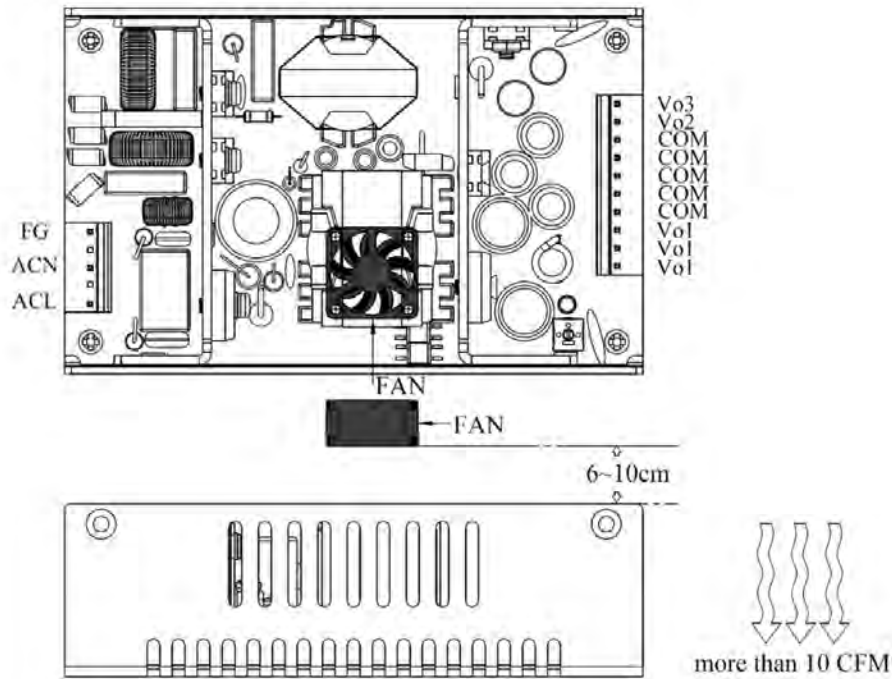
Output Model	Vo1	Vo2	Vo3
A	+5V	+12V	-12V
B	+5V	+15V	-15V
C	+5V	+24V	+12V
D	+12V	+24V	+5V

**MECHANICAL DIMENSIONS - FAN PLACEMENT RECOMMENDATION**

Open Frame (PMMK130T-xx-A):



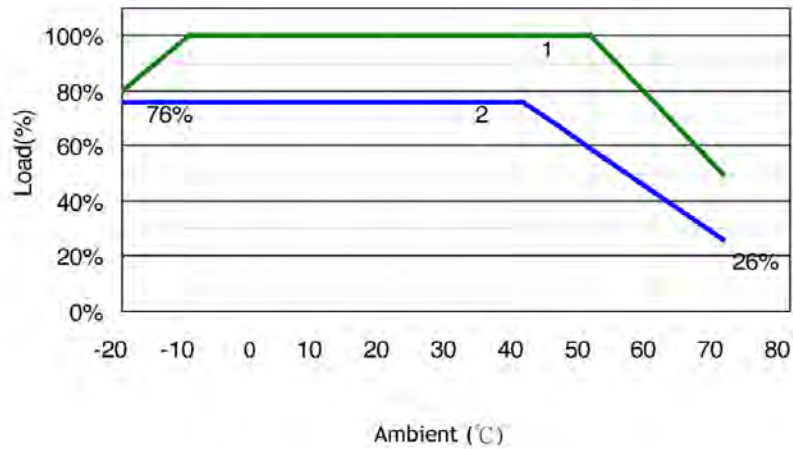
U-Bracket (PMMK130T-xxU-A):



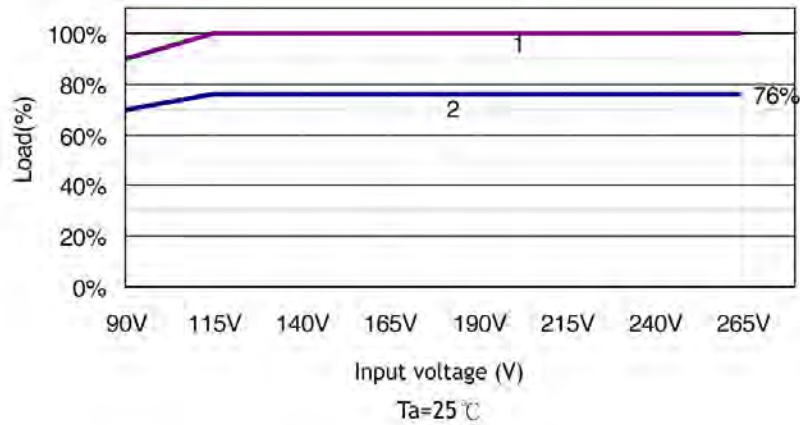


**DERATE CURVES**

Open Frame (PMMK130T-xx):



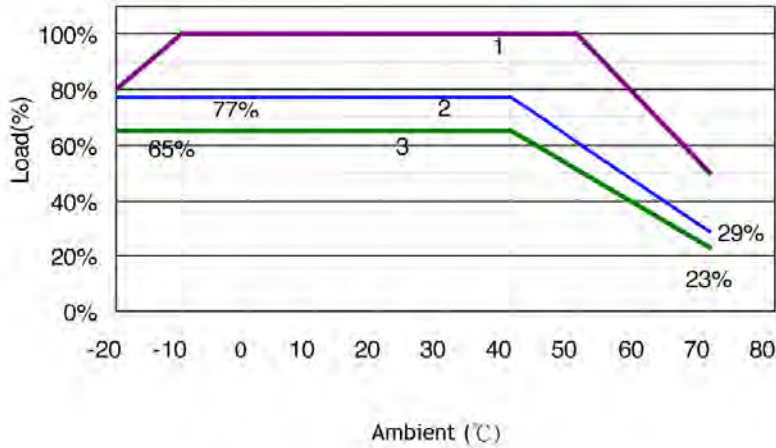
- 1. Forced air cooling 10CFM
- 2. Convection



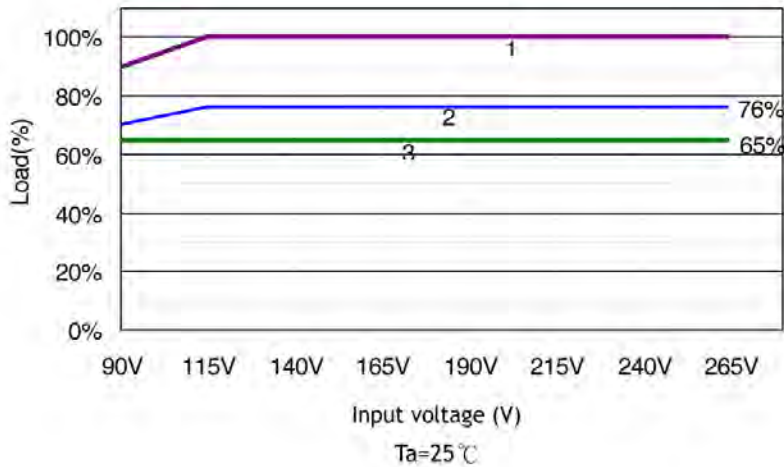
- 1. Forced air cooling 10CFM
- 2. Convection

**DERATE CURVES**

U-Bracket (PMMK130T-xxU):



- 1. Forced air cooling 10CFM
- 2. C · D convection
- 3. A · B convection



- 1. Forced air cooling 10CFM
- 2. C · D convection
- 3. A · B convection

**REGULATION**

