

130W Open Frame and U-Channel Power Supplies with PFC



3" x 5" x 1.4"

- 130 Watts Output Power
- Single Output
- Universal 90-264VAC Input
- 5VDC to 48VDC Outputs
- 4242VDC Input to Output Isolation
- Active Power Factor Correction



| Model Number         | Output V | Output I max. | Ripple & Noise | Efficiency(min/nom) | Capacitive Load |
|----------------------|----------|---------------|----------------|---------------------|-----------------|
| <b>SINGLE OUTPUT</b> |          |               |                |                     |                 |
| PMK130S-5 (U)(-A)    | 5 VDC    | 22 Amps       | 100mV pk-pk    | 75% / 80%           | 10,000uF        |
| PMK130S-12 (U)(-A)   | 12 VDC   | 10.8 Amps     | 120mV pk-pk    | 80% / 82%           | 26,800uF        |
| PMK130S-15 (U)(-A)   | 15 VDC   | 8.7 Amps      | 120mV pk-pk    | 80% / 85%           | 22,000uF        |
| PMK130S-24 (U)(-A)   | 24 VDC   | 5.4 Amps      | 120mV pk-pk    | 82% / 85%           | 28,000uF        |
| PMK130S-28 (U)(-A)   | 28 VDC   | 4.6 Amps      | 120mV pk-pk    | 82% / 85%           | 16,800uF        |
| PMK130S-36 (U)(-A)   | 36 VDC   | 3.6 Amps      | 120mV pk-pk    | 82% / 85%           | 1,950uF         |
| PMK130S-48 (U)(-A)   | 48 VDC   | 2.7 Amps      | 120mV pk-pk    | 82% / 85%           | 7,800uF         |

- Note:
- The PMK130 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 "PMK130S-5U-A" represents a single output 5VDC U-Channel supply with 3.96 pitched pins (5 Input; 10 Output) . See the Mechanical Dimensions on pages 3 through 8 in this specification
  - 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.

**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           | <3.5mA @ 264VAC, 50Hz            |

**OUTPUT SPECIFICATIONS**

|                             |                            |
|-----------------------------|----------------------------|
| Voltage and Current         | See Selection Chart        |
| Maximum Output Power        | 130 Watts                  |
| Preset Accuracy (Note 6)    | 1%                         |
| Line Regulation (Note 5)    | 0.5% nom / 1% max          |
| Load Regulation (20% to FL) | 0.5% nom / 1% max          |
| Ripple/Noise (Notes 1,2,7)  | See Selection Chart        |
| Turn On                     | <4S, typ.                  |
| Hold Up Time                | 20mS, typ.                 |
| Rise Time                   | 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: | UL60950-1 2nd ed./<br>C22.2 60950-1 2nd ed.                       |
|                       | CB:     | IEC60950-1 2nd ed.  |
| Isolation (Note 3)    |         | 4242VDC I/P - O/P *<br>2828 VDC I/P - GND *<br>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);<br>2KV (L, N-PE)               |
|                            | CS: IEC61000-4-6 3V (EMF)                                     |
|                            | Dips: IEC61000-4-11 95% 250CY,<br>70% 25CY, 40% 5CY, 5% 0.5CY |
| MTBF                       | 197,000 Hrs min. 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<br>(5" x 3.17" x 1.50") |
| Weight | Open Frame: | 10.25 oz (291g)                           |
|        | U-Channel:  | 13.38 oz (380g)                           |

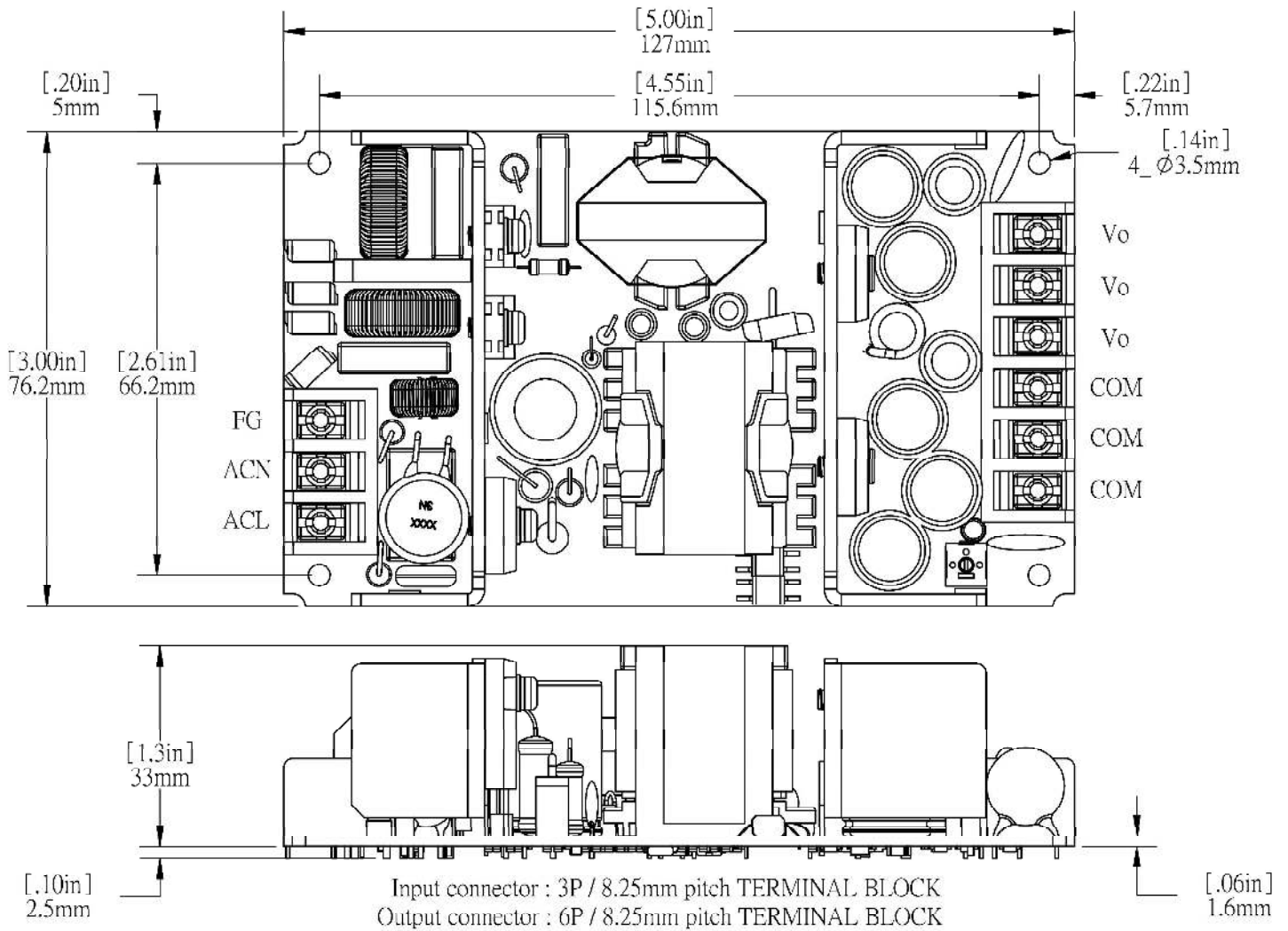
**NOTES:**

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 noise 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 PMMK130S Open Frame Power Supply.

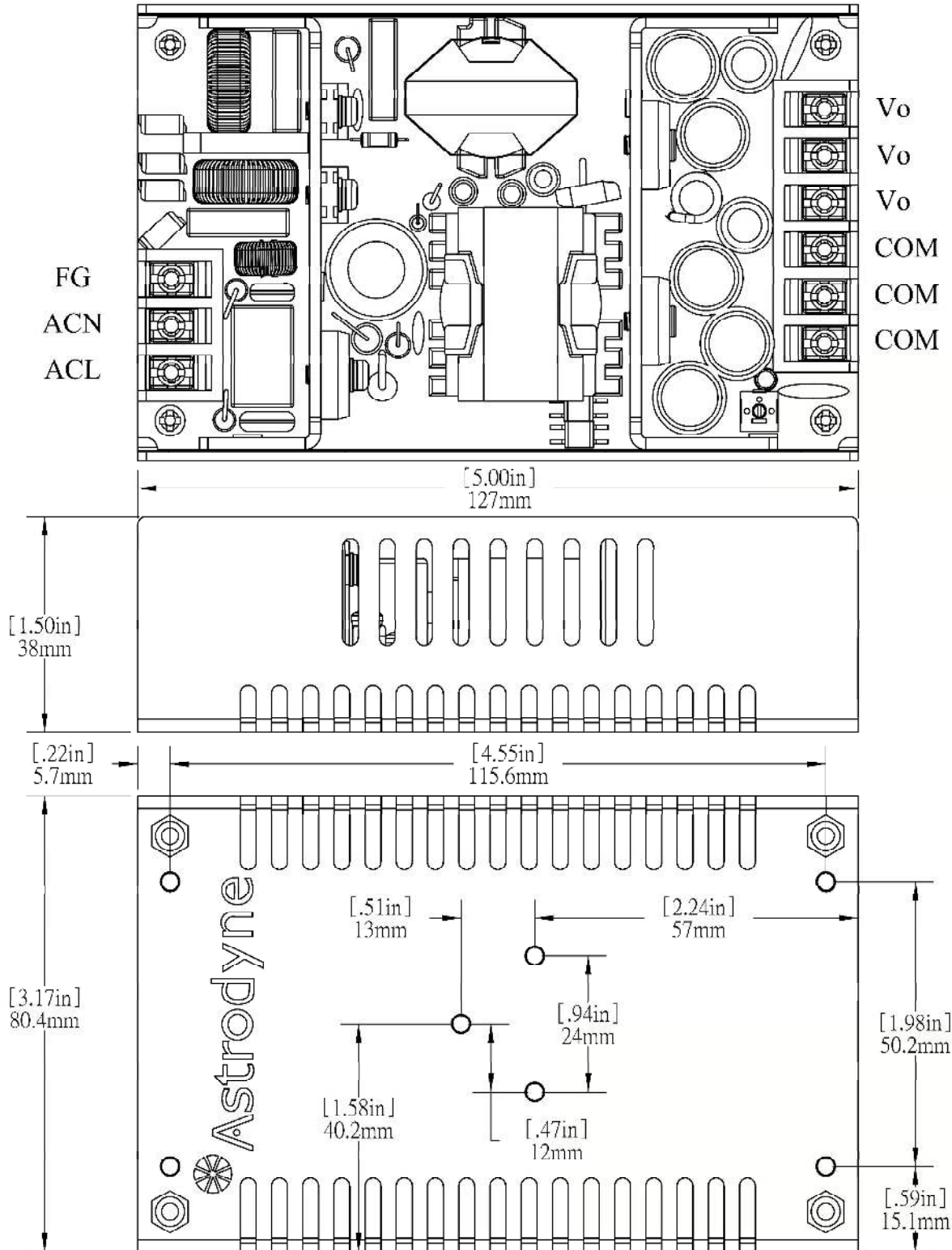
**MECHANICAL DIMENSIONS**

Open Frame (PMK130S-xx)



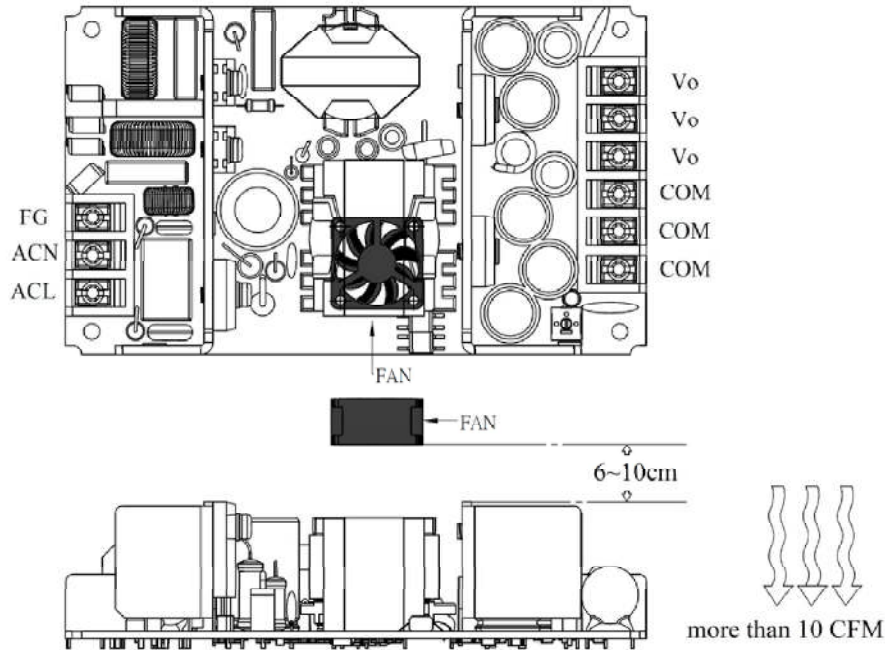
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**MECHANICAL DIMENSIONS U Bracket (PMK130S-xxU)**

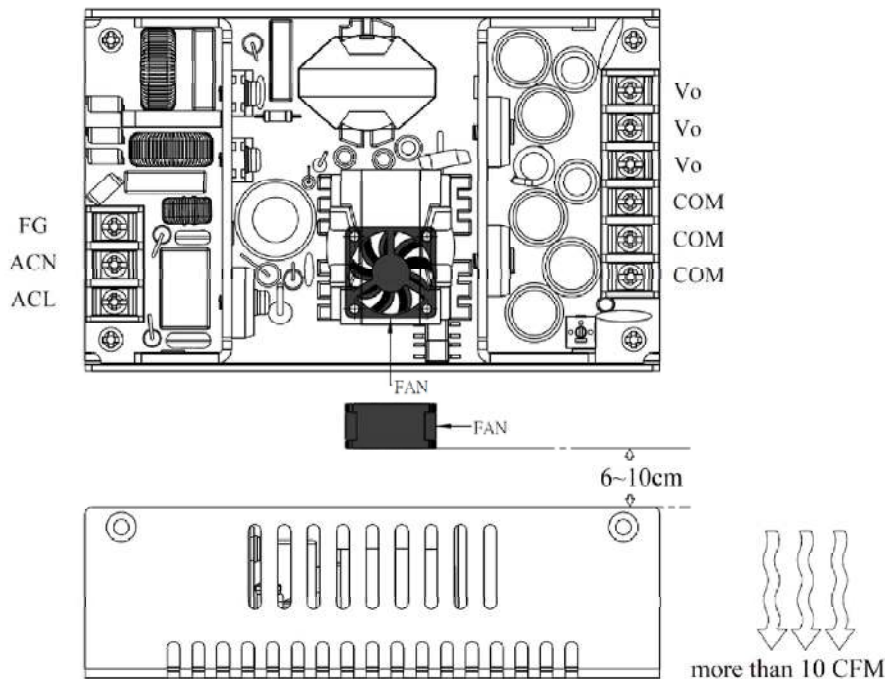


**MECHANICAL DIMENSIONS - FAN PLACEMENT RECOMMENDATION**

Open-Frame (PMK130S-xx) :

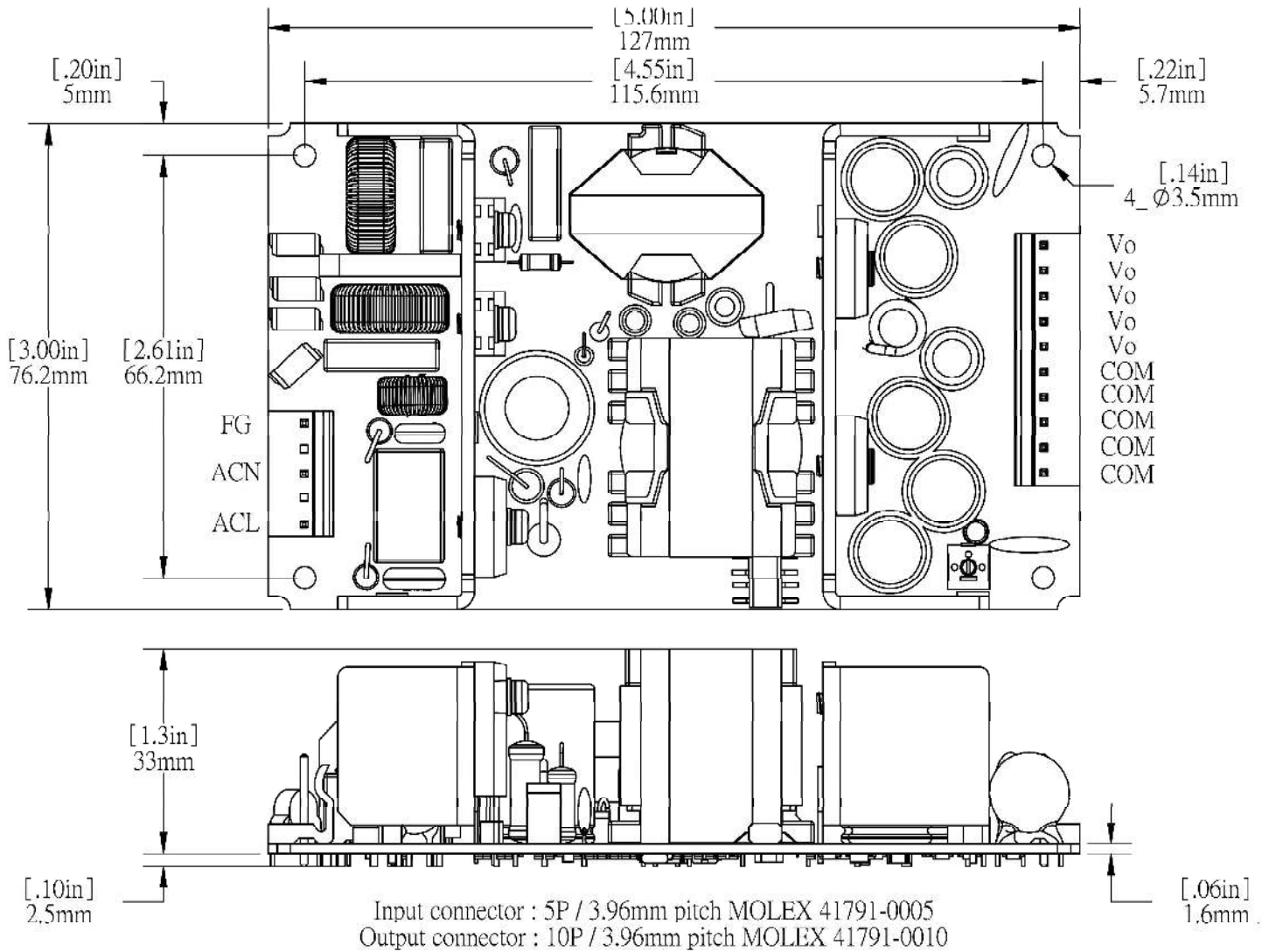


U-Bracket (PMK130S-xxU) :

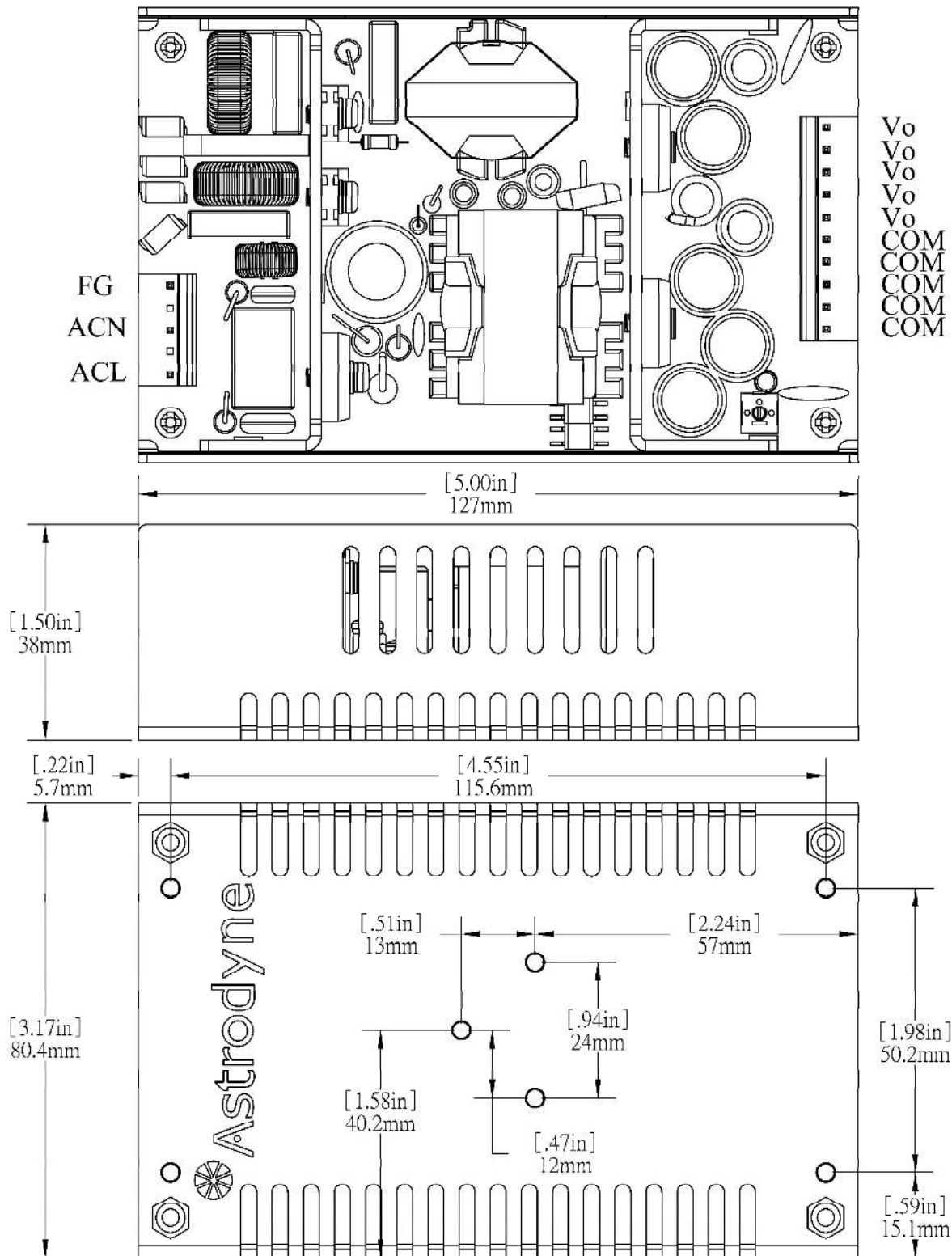


**MECHANICAL DIMENSIONS**

**Open Frame (PMK130S-xx-A)**

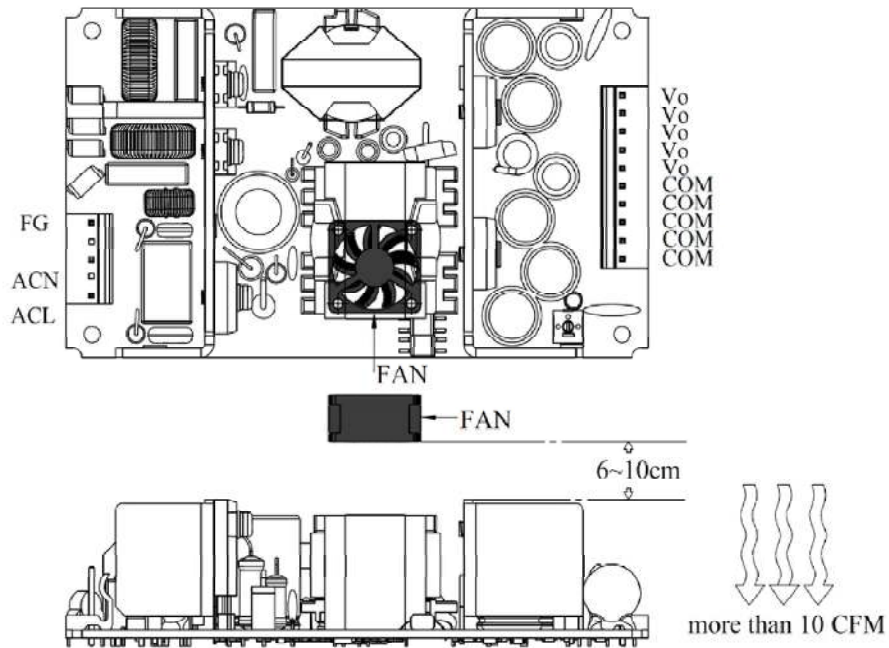


**MECHANICAL DIMENSIONS U Bracket (PMK130S-xxU-A)**

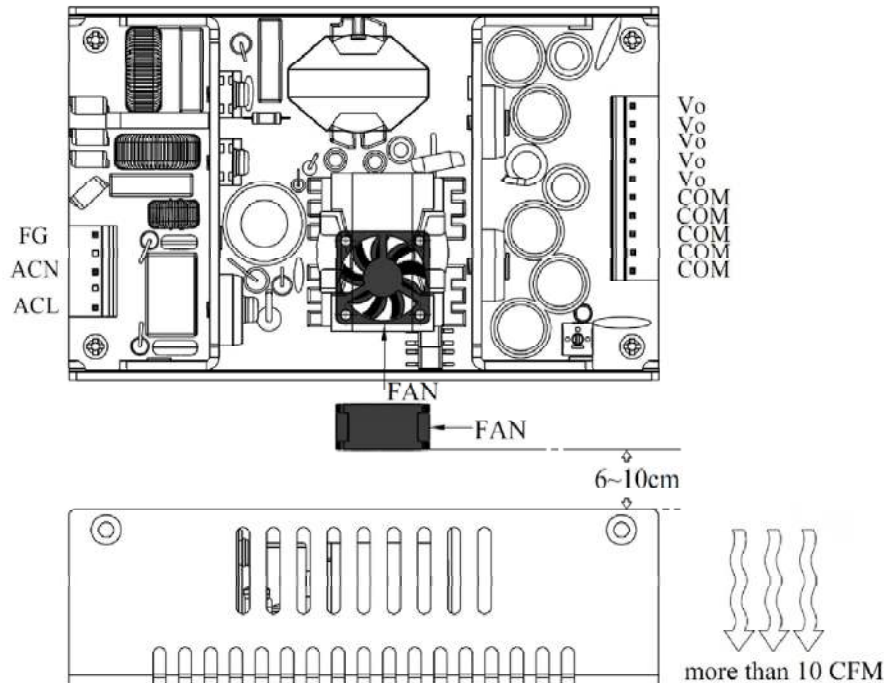


**MECHANICAL DIMENSIONS - FAN PLACEMENT RECOMMENDATION**

Open-Frame (PMK130S-xx-A) :



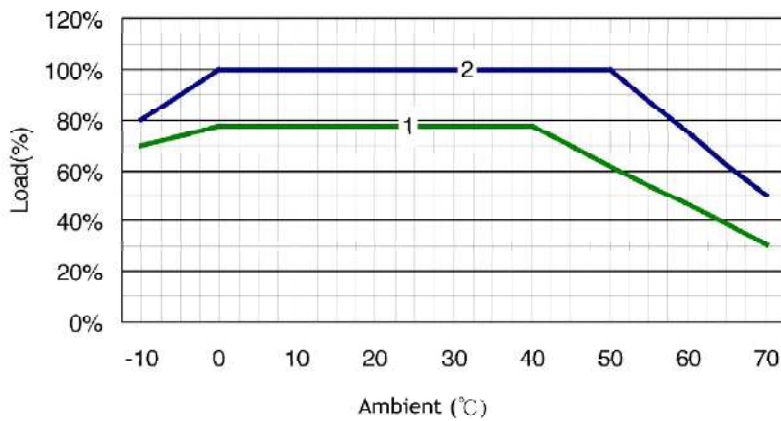
U-Bracket (PMK130S-xxU-A) :



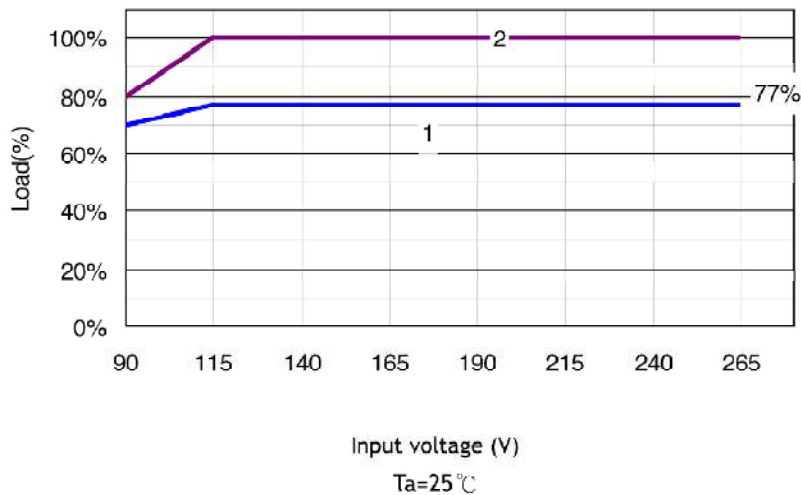


**DERATE CURVES**

Open-Frame (PMK130S-xx) :



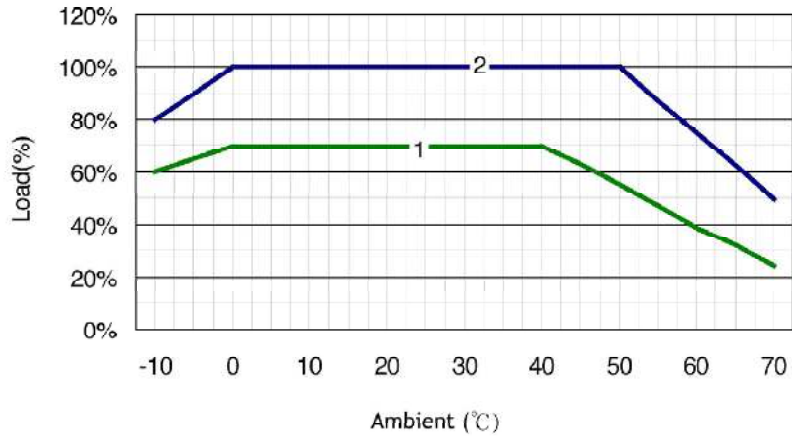
- 1. Convection
- 2. Forced air cooling 10CFM



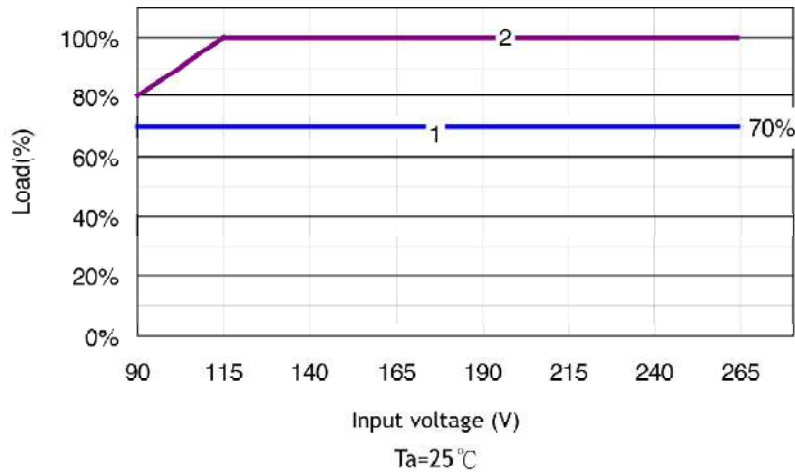
- 1. Convection
- 2. Forced air cooling 10CFM

**DERATE CURVES**

U Bracket (PMK130S-xxU) :



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



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