

## **UNIVERSAL INPUT AC TO DC PCB OPEN FRAME SINGLE & DUAL INTERNAL SWITCHING POWER SUPPLIES 30-40 WATT APS38VI (ALSO NAMED PVI-40) SERIES**



### **FEATURES:**

- FOR DISK DRIVE & ETC. APPLICATIONS
- INSTALLED WITH LED & FAN DRIVING OUTPUT CONNECTORS
- DESIGNED TO MEET UNIVERSAL SAFETY STANDARDS
- UL/CSA/TUV APPROVALS
- EMI/RFI MEET CISPR PUB. 22 CLASS B & FCC CLASS B
- CE MARKING COMPLIANCE

### **SPECIFICATIONS**

#### **INPUT SPECIFICATIONS:**

**Input Voltage:** Typ. 85-264VAC  
**Input Connector:** Molex 5273(vertical)  
**Input Frequency:** 47-63Hz (Consult for 440Hz)  
**Inrush Current:** 50A peak at 264VAC  
**Input Current:** 1.2A @ 115VAC, 0.6A @230VAC  
**Dielectric Withstand:** Meets IEC950  
3,000VAC-Output/Input  
1,500VAC-Input/GND  
500VAC-Output/GND  
**EMI/RFI:** CISPR PUB.22 Class B & FCC Class B  
**Hold-up Time:** 10mS@110VAC, 50mS @230VAC  
**Power Fail Signal:** Not available  
**No Load Operation:** No damage at no load  
**Earth Leakage:** Less than 0.25mA@230VAC

#### **OUTPUTS SPECIFICATIONS:**

**Output Voltage:** See RATINGS CHARTS  
**Output Currents:** See RATINGS CHARTS  
**Output Connector:** Molex 5273(vertical)  
**Fan Connector:** Molex 5045(straight pin)  
**LED Connector:** Molex 5045(straight pin)  
**Line Regulation:** VO1 typ.  $\pm 0.2\%$ , VO2 typ.  $\pm 0.2\%$   
**Load Regulation:** Main O/P VO1 typ. 1.0%  
Aux. O/P VO2 typ. 2-3%  
**Noise & Ripple:** VO1 <50 mV peak to peak  
VO2 typ. less than 1% peak to peak  
**OVP:** VO1 MAIN O/P only @6.2V  $\pm 0.4V$   
**Adj.:** VO1 MAIN O/P only, -10% till OVP  
**Overload Protection:** 125-150% max. power  
**Max .cont. output power:** 40 Watts

#### **GENERAL SPECIFICATIONS:**

**Efficiency:** Typ. 70%  
**Switching Frequency:** Fixed frequency 38KHz  
**Circuit Topology:**  
Fixed frequency flyback circuit  
**Transient Response:** Output voltage returns in  
less than 3mS following a 50% load change.  
**Safety Standard:** UL1950/EN60950 Class I  
**Operating Temperature:** 0-50°C  
If with 20 CFM fan cooling 0-70°C  
**Storage Temperature:** -20 to +85°C  
**Temperature Coefficient:** 0.04%/°C  
**Cooling:** Free air convection  
Recommended 20CFM fan cooling  
**Construction:** Open frame PCB version



# OUTPUT VOLTAGE/CURRENT RATING CHARTS

## SINGLE OUTPUT:

MODEL NO.	MAIN O/P VO1 @ ★		
	TYP.	VOLT.	PEAK
APS38VI-10	7.5A	5V	9.0A
APS38VI-11	3.3A	12V	4.5A
APS38VI-12	2.6A	15V	3.5A
APS38VI-13	1.6A	24V	2.0A
APS38VI-19	9.0A	3.3V	10.0A

## DUAL OUTPUT:

MODEL NO.	MAIN O/P VO1 @ ★			AUX. +VO2 †		
	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK
APS38VI-21 (PVI-40-21TA)	3.0A	+5V	4.0A	2.0A	+12V	4.0A
APS38VI-22	3.0A	+5V	4.0A	1.6A	+15V	3.0A
APS38VI-23	3.0A	+5V	4.0A	1.0A	+24V	2.0A

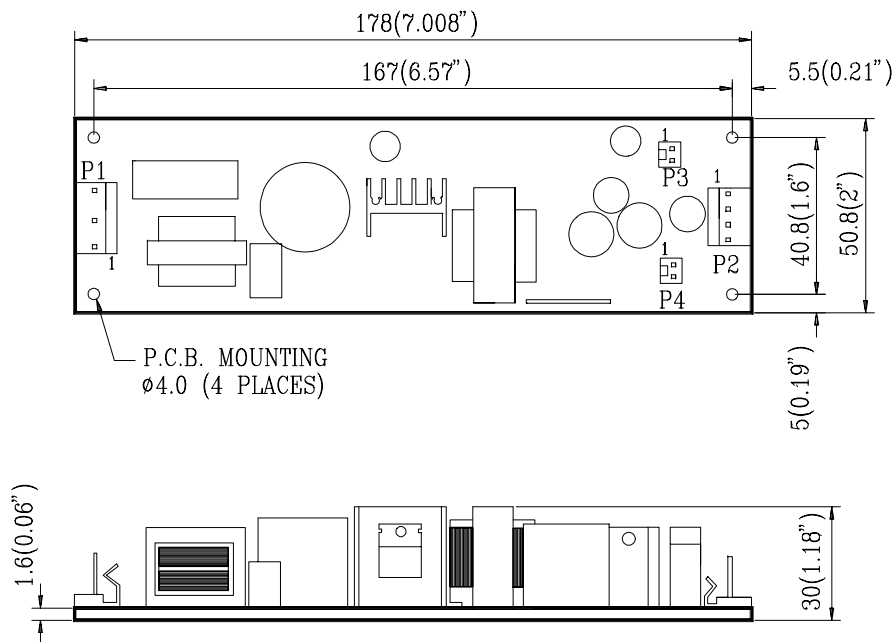
Symbols: "★" OVP built-in. "@ "Adjustable. "†" Stacked on main output.

Remark: Peak output less than 60 seconds. Peak currents can't be drawn from all output at the same time.

MECHANICAL DIMENSIONS: MM (INCHES)

WEIGHT: 208.5g (7.35 Oz.)

POWER DENSITY: 2.3W/Cubic Inch



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

### INPUT CONNECTOR P1

PIN NO.	ASSIGNMENT
P1-L	AC-LINE
P1-N	AC-NEUTRAL
P1-G	AC-GROUND

Mating: Molex 5196 or equivalent.

### FAN CONNECTOR P3

PIN NO.	ASSIGNMENT
P3-1	- 12VDC
P3-2	+ 12VDC

Mating: Molex 5051 or equivalent.

### SINGLE OUTPUT CONNECTOR P2

PIN NO.	ASSIGNMENT
P2-1	VO1 +
P2-2,3	DC COMMON
P2-4	VO1 +

Mating: Molex 5196 or equivalent.

### LED CONNECTOR P4

PIN NO.	ASSIGNMENT
P4-1	- 5VDC
P4-2	+ 5VDC

Mating: Molex 5051 or equivalent.

### DUAL OUTPUT CONNECTOR P2

PIN NO.	ASSIGNMENT
P2-1	VO2+
P2-2,3	DC COMMON
P2-4	VO1 +

Mating: Molex 5196 or equivalent.