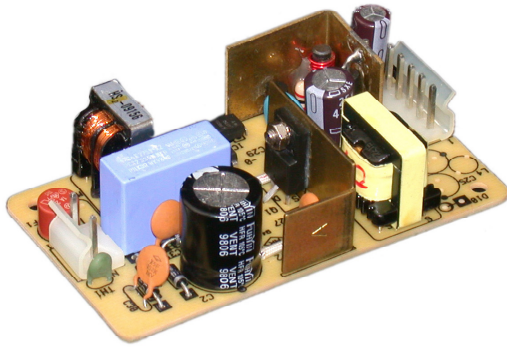


# **TOTAL POWER INT'L**

## **UNIVERSAL INPUT AC-DC PCB OPEN FRAME SINGLE & DUAL OUTPUT 13-15 WATTS INTERNAL SWITCHING POWER SUPPLIES TPV113 SERIES**



### **FEATURES:**

- ACCOMMODATE UNIVERSAL AC SOURCES
- LOW-PROFILE & COMPACT PCB FORMAT
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR PUB. 22 & FCC CLASS B
- CE MARKING COMPLIANCE

### **SPECIFICATION**

#### **INPUT SPECIFICATION**

**Input Voltage:** Range typ. 90-264Vac.  
Rating 100 to 240Vac.

**Input Connector:** Molex # 5045.

**Input Frequency:** 47-63Hz

**Inrush Current:** Typ. 26.0A @230Vac.

**Input Current:** Typ. 0.30A @115Vac, 0.15A@230Vac.

**Dielectric Withstand:** Meet IEC 60950-1.

**EMI:** Meet CISPR PUB. 22 & FCC Class B.

**Hold-up Time:** Typ. 10mS @115Vac, 40mS @230Vac.

**Earth Leakage:** Typ. 0.25mA @230Vac.

#### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Wattage:** Typ. 13-15watts.

**Output Connector:** Molex # 5045.

**Line Regulation:** Typ. 0.1%.

**Load Regulation:** Main VO1 typ.  $\pm 2.0\%$ .  
Aux. VO2 typ.  $\pm 5.0\%$  (stacked on).

**Noise & Ripple:** Typ. 1.0% peak to peak.

**OVP:** Built-in at VO1 (Zener diode).

**Adjustability:** Available at VO1.

**Overload Protection (OLP):**  
Fully protected against output overload and short circuit.  
OLP set at about 125-150% rating output wattage.  
Consult the factory for OLP setting.

#### **GENERAL SPECIFICATION**

**Efficiency:** Typ. 70-80%.

**Switching Frequency:** 40 KHz.

**Circuit Topology:** Fixed Frequency Flyback Circuit.

**Transient Response:** Output voltage returns in less than 3mS following a 25% load change.

**Safety Standard:** IEC 60950-1/UL 60950-1 Class II.

**Operating Temperature:** 0 to +50°C.

**Storage Temperature:** -20 to +85°C.

**Temperature Coefficient:** Typ. 0.04%/°C.

**Cooling:** Free air convection.

**Construction:** PCB open frame format.

**Power Density:** 2.12 Watts / Cubic Inch.

Note: Due to requests in market and advances in technology, specifications subject to change without notification.



# OUTPUT VOLTAGE / CURRENT RATINGS CHART

## SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★		
	Typ.	Volt	Peak
TPVI13-S033030	3.0A	3.3V	3.7A
TPVI13-S050028	2.8A	5.0V	3.4A
TPVI13-S120012	1.2A	12.0V	1.5A
TPVI13-S150010	1.0A	15.0V	1.2A
TPVI13-S240006	0.6A	24.0V	0.8A
TPVI13-S480003	0.3A	48.0V	0.4A

## DUAL OUTPUT

MODEL NO.	MAIN VO1 ★			AUX. VO2 †		
	Typ.	Volt.	Max.	Typ.	Volt.	Max.
TPVI13-D033I	2.5A	+3.3V	3.5A	0.4A	+12V	0.5A
TPVI13-D033K	2.5A	+3.3V	3.5A	0.3A	+15V	0.4A
TPVI13-D033M	2.5A	+3.3V	3.5A	0.2A	+24V	0.2A
TPVI13-D050I	2.0A	+5.0V	2.5A	0.4A	+12V	0.5A
TPVI13-D050K	2.0A	+5.0V	2.5A	0.3A	+15V	0.4A
TPVI13-D050M	2.0A	+5.0V	2.5A	0.2A	+24V	0.2A

Symbol: "★" OVP built-in. "†" Stacked on main output.

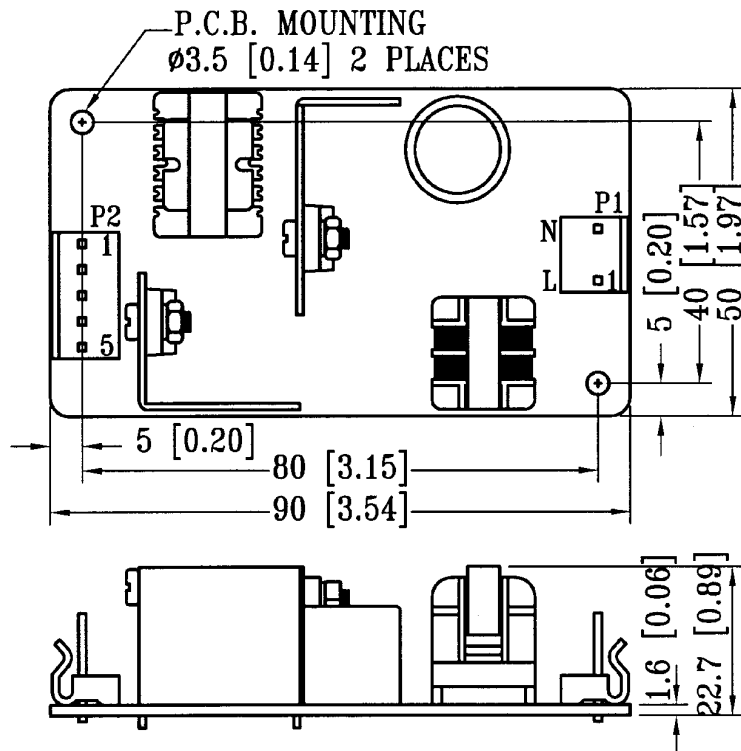
Remark: (1) At least 20% of typical main output current is required to maintain stated regulation.

(2) Peak output, less than 60 Sec. with 10% duty cycle.

(3) Max. current can't be drawn from all output at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 62.0g (2.19 Oz.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	AC INPUT		SINGLE OUTPUT		DUAL OUTPUT		
	AC-LINE	AC-NEUTRAL	+VO1	DC-COM	VO1	VO2	DC-COM
CONNECTOR & PIN#	P1-L	P1-N	P2-4,5	P2-1,2	P2-4,5	P2-3	P2-1,2

Mating connector: Molex 5051series or equivalent.