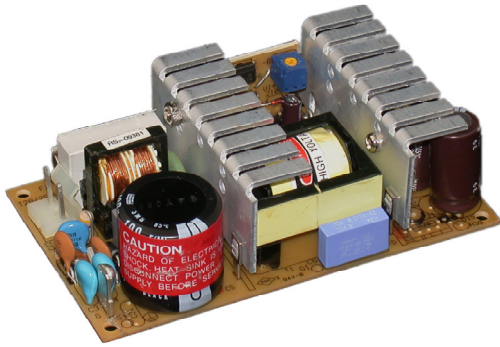




# Total Power International, Inc.

## UNIVERSAL INPUT AC-DC PCB OPEN FRAME SINGLE & MULTI-OUTPUT 40-50 WATTS INTERNAL SWITCHING POWER SUPPLIES TPVI41 SERIES



### FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- SMALL & COMPACT IN SIZE
- 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 V-M.

**Input Frequency:** 47-63Hz.

**Inrush Current:** Typ. 25.0A @230Vac.

**Input Current:** Typ. 0.7-1.2A@115Vac.  
0.3-0.4A@230Vac.

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

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

**Hold-up Time:** Typ. 18mS @115Vac, 90mS @230Vac.

**Earth Leakage:** Less than 0.3mA @230Vac.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Wattage:** Typ. 40 watts with convection or  
50 watts with 20 cfm fan cooling.

**Output Connector:** Molex V-M.

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

**Load Regulation:** Main VO1 typ. ± 2.0%.  
Aux. VO2 typ. ± 5.0%(stacked on).  
VO3 typ. ± 3.0%(P.R.).

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

**OVP:** Built-in at main VO1 (Latch).

**Adjustability:** Available at main VO1.

**Overload Protection (OLP):** Fully protected against output  
overload and short circuit.  
Consult the factory for OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 75-85%.

**Switching Frequency:** 60K Hz.

**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 I.

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

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

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

**Cooling:** Free air convection, or with 20 cfm fan cooling.

**Construction:** PCB open frame format.

**Power Density:** 3.36-3.79Watts / Cubic Inch.

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



For the details of safety approval, please consult the factory.



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## OUTPUT VOLTAGE / CURRENT RATINGS CHART

### SINGLE OUTPUT

MODEL NO.	MAIN VO1 @★		
	Typ.	Fan-C	Volt.
TPVI41-10	8.00A	9.0A	5.0V
TPVI41-11	3.30A	4.0A	12.0V
TPVI41-12	2.60A	3.3A	15.0V
TPVI41-13	1.60A	2.0A	24.0V
TPVI41-14	1.28A	1.8A	30.0V
TPVI41-16	0.80A	1.0A	48.0V
TPVI41-19	8.00A	9.0A	3.3V

### DUAL OUTPUT

MODEL NO.	MAIN VO1 @★			AUX. VO2 † or – VO3		
	Typ.	Fan-C	Volt.	Typ.	Fan-C	Volt.
TPVI41-20	6.0A	7.0A	5.0V	2.0A	2.5A	5.0V
TPVI41-21	4.0A	4.5A	5.0V	2.0A	2.5A	12.0V
TPVI41-22	4.0A	4.5A	5.0V	1.5A	2.0A	15.0V
TPVI41-23	4.0A	4.5A	5.0V	1.0A	1.5A	24.0V
TPVI41-24	1.8A	2.0A	12.0V	1.8A	2.0A	12.0V
TPVI41-290	5.0A	6.0A	3.3V	1.8A	2.0A	5.0V

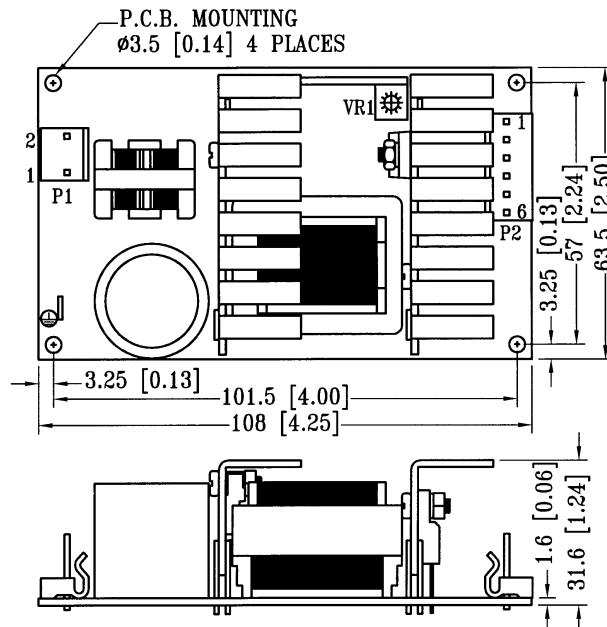
### TRIPLE OUTPUT

MODEL NO.	MAIN VO1 @★			AUX. VO2 †			AUX. VO3 •		
	Typ.	Fan-C	Volt.	Typ.	Fan-C	Volt.	Typ.	Fan-C	Volt.
TPVI41-30	4.0A	4.5A	+5.0V	2.0A	3.0A	+12V	0.2A	0.5A	-12V
TPVI41-31	4.0A	4.5A	+5.0V	2.0A	3.0A	+12V	0.2A	0.5A	-5V
TPVI41-32	4.0A	4.5A	+5.0V	0.5A	1.0A	+24V	0.2A	0.5A	-12V
TPVI41-33	4.0A	4.5A	+5.0V	1.6A	2.0A	+15V	0.2A	0.5A	-15V
TPVI41-33A	1.0A	1.5A	+5.0V	0.5A	0.8A	+15V	0.5A	0.8A	-15V
TPVI41-390	4.0A	4.5A	+3.3V	1.8A	2.0A	+5V	0.2A	0.5A	-12V
TPVI41-391	4.0A	4.5A	+3.3V	1.8A	2.0A	+5V	0.2A	0.5A	-5V

Symbol: "★" OVP built-in. "@" Adjustable. "†" Stacked on main O/P. "•" Installed with Post Regulator (P.R.).

### MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 169.0g (5.96 Oz.)



### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	AC INPUT			SINGLE OUTPUT		DUAL OUTPUT			TRIPLE OUTPUT			
	AC-LINE	AC-NEUTRAL	FASTON	VO1	DC COM	VO1	VO2	DC COM	VO1	VO2	VO3	DC COM
CONNECTOR & PIN #	P1-1	P1-2	AC-GROUND	P2-1,2,3	P2-4,5,6	P2-2,3	P2-1	P2-4,5,6	P2-2,3	P2-1	P2-6	P2-4,5

Mating connector: Molex 5195 or 5239 series.