

# TOTAL POWER INT'L

## AC/DC EXTERNAL DESKTOP ADAPTER UNIVERSAL INPUT MULTIPLE OUTPUT 14-16 WATTS SWITCHING POWER SUPPLIES TPES14 SERIES



### FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- DESKTOP WITH IEC320 AC RECEPTACLE
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET EN55022/ FCC CLASS B
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** 90-264Vac typical.  
**Input Connector:** IEC320-3P DT7 or IEC320-2P  
DT8 for dual output.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** 26A @230Vac typical.  
**Input Current:** 0.4A @115Vac/ 0.2A @230Vac typical.  
**Dielectric Withstand:** Meet IEC950.  
**EMI:** Meet EN55022 / FCC Class B.  
**Hold-up Time:** 10mS @115Vac or  
40mS @230Vac typical.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** 14-16 Watts typical.  
**Output Connector & Cord:** Optional.  
**Line Regulation:** 0.1% typical.  
**Load Regulation:** Main O/P VO1  $\pm 1.5-3.0\%$  typical.  
Aux. O/P VO2  $\pm 3.0-5.0\%$  typical.  
Aux. O/P VO3  $\pm 1.0-2.0\%$  typical with P.R.  
**Noise & Ripple:** 1.0% peak to peak typical.  
**OVP:** Built-in "Latch type" on main output VO1 only.  
Latch type or Zener diode clamp for dual output series.  
**Adjustability:** Factory set.  
**Overload Protection:**  
125-150% typical of max. power overrange or  
short circuit, power foldback & self-recovering.

#### GENERAL SPECIFICATION

**Efficiency:** 74-78% typical.  
**Switching Frequency:** Approximate 35K Hz.  
**Circuit Topology:** Fixed Frequency Flyback circuit.  
**Transient Response:** Output voltage returns in less than  
3mS following a 25% load change.  
**Safety Standard:** UL1950/ EN60950 Class I.  
Class II for dual output series.  
**Power Density:** 1.12Watts / Cubic inch.  
**Operating Temperature:** 0 °C to room temperature.  
**Storage Temperature:** -20°C to +85°C.  
**Temperature Coefficient:** 0.04%/°C typical.  
**Cooling:** Free air convection.  
**Construction:** Impact resistant thermo-plastic  
enclosure case.  
**Desktop Format.**  
**Weight :** 330.0g (11.6 Oz.)

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Load regulation is measured at 115Vac or 230Vac in percentage to indicate the change in output voltage as the load is varied from half load to full load (unit  $\pm\%$ ).  
For the multi-output, the main output remains 50% load and other aux. output remains 20% load.

(3) The exact obtainable load regulation depends upon the output load current & cord selected. Upper data are for 6 ft. (2 m) cord AWG#18 wires.



## OUTPUT VOLTAGE/CURRENT RATINGS CHART

### SINGLE OUTPUT

MODEL NO.	MAIN O/P VO1 ★	
	TYP.	VOLT.
TPES14-10	2.50A	5.0V
TPES14-10A	2.20A	6.2V
TPES14-11	1.25A	12.0V
TPES14-12	1.00A	15.0V
TPES14-14	1.40A	9.5V
TPES14-16	1.50A	9.0V
TPES14-19	3.00A	3.3V

### DUAL OUTPUT

MODEL NO.	MAIN O/P VO1 ★			AUX. O/P VO2 †		
	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.
TPES14-21	1.0A	+5.0V	1.5A	0.75A	+12.0V	1.5A
TPES14-22	1.0A	+5.0V	1.5A	0.60A	+15.0V	1.2A
TPES14-23	1.0A	+5.0V	1.5A	0.40A	+24.0V	0.8A
TPES14-291	1.0A	+3.3V	1.5A	0.75A	+12.0V	1.5A
TPES14-292	1.0A	+3.3V	1.5A	0.60A	+15.0V	1.2A
TPES14-293	1.0A	+3.3V	1.5A	0.40A	+24.0V	0.8A

### TRIPLE OUTPUT

MODEL NO.	MAIN O/P VO1 ★			AUX. O/P VO2 †			AUX. O/P VO3 ●		
	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.
TPES14-30A	0.75A	+5.0V	2.0A	1.0A	+12.0V	1.0A	0.05A	-12.0V	0.5A
TPES14-30	1.50A	+5.0V	2.0A	0.2A	+12.0V	0.5A	0.20A	-12.0V	0.4A
TPES14-31	1.50A	+5.0V	2.0A	0.2A	+12.0V	0.5A	0.50A	-5.0V	0.9A
TPES14-32	1.50A	+5.0V	2.0A	0.1A	+24.0V	0.3A	0.20A	-12.0V	0.4A
TPES14-33	1.50A	+5.0V	2.0A	0.2A	+15.0V	0.4A	0.50A	-5.0V	0.8A
TPES14-34	1.50A	+5.0V	2.0A	0.2A	+15.0V	0.4A	0.15A	-15.0V	0.3A

Symbol: "★" OVP Built-in. "●" Installed with Post Regulator (P.R.). "†" Stacked on main output.

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

(2) Max. load is the continuous operating load of each rail. But the max. load of each rail can not be drawn from all output at the same time.

**MECHANICAL DIMENSIONS: MM [INCHES]**

**WEIGHT: 330.0g (11.6 Oz.).**

