

### DESCRIPTION

The TMP55 series consists of 15 standard desktop AC/DC switching power adapters with 40 to 55 watts of continuous output power. The units are enclosed in a 94V-1 rated plastic case with an IEC 320 inlet to mate with interchangeable cord for world-wide use. An on/off switch can be added at customer's request. All models meet CISPR 11 and FCC class B emission limits, and are designed for medical applications.

### FEATURES

- 15 standard desktop models
- Single, dual or triple outputs
- Optional output connectors
- Optional on/off switch
- 100% burn-in
- Wide input range 85 to 264VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection

### INPUT SPECIFICATIONS

**Input voltage :** 85 to 264 VAC  
**Input frequency :** 47 to 63 Hz  
**Input current :** 1.50A (rms) for 115 VAC  
0.90A (rms) for 230VAC  
**Leakage current :** 90µA max. @ 115VAC, 60Hz  
150µA max. @ 230VAC, 50Hz

### OUTPUT SPECIFICATIONS

**Output voltage/current :** See rating chart  
**Total output power :** 55 watts maximum  
**Ripple and noise :** 1% peak to peak maximum  
**Overvoltage protection :** Provided on output #1 only; set at 112-132% of its nominal output voltage  
**Overcurrent protection :** All outputs protected to short circuit conditions  
**Temperature coefficient :** All outputs  $\pm 0.04\%/^{\circ}\text{C}$  maximum  
**Transient response :** Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500µs after a 25% step load change

### ENVIRONMENTAL SPECIFICATIONS

**Operating temperature :** 0°C to +70°C  
**Storage temperature :** -40°C to +85°C  
**Relative humidity :** 5% to 95% non-condensing  
**Derating :** Derate from 100% at +50°C linearly to 50% at +70°C

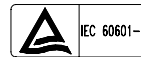
### TMP55 SERIES



### Safety Standard Approvals :



UL 2601-1  
CSA C22.2 No. 601.1



TÜV EN60601-1

### GENERAL SPECIFICATIONS

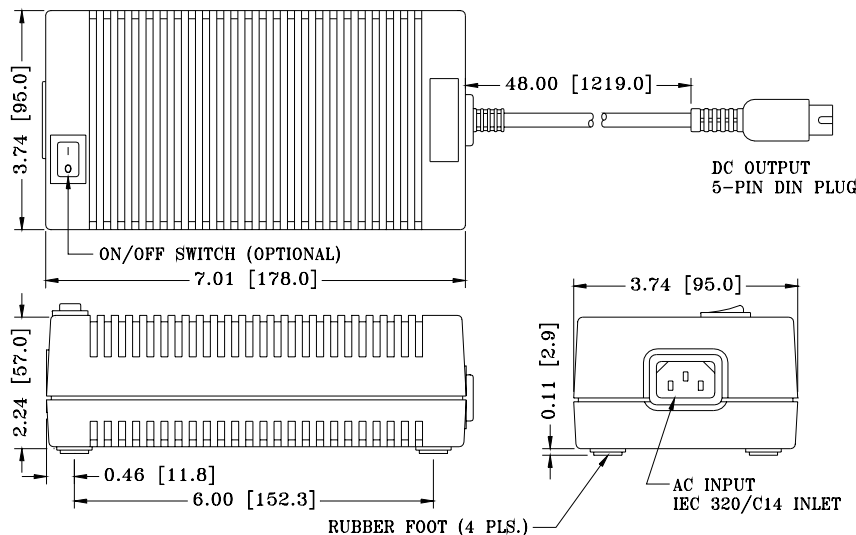
**Switching frequency :** 40KHz  $\pm 5\text{KHz}$   
**Efficiency :** 70% minimum on single output models with  $V_o \geq 10\text{V}$ , 65% minimum on the others  
**Hold-up time :** 10 msec minimum at 110VAC  
**Line regulation :**  $\pm 0.5\%$  maximum at full load  
**Inrush current :** 15 amps @ 115VAC, or 30 amps @ 230VAC, at 25°C cold start  
**Withstand voltage :** 4000VAC from input to output  
1500VAC from input to ground  
500VAC from output to ground  
**MTBF :** 450,000 hours minimum at full load at 25°C ambient, calculated per MIL-HDBK-217F  
**EMC performance (EN60601-1-2: 2001)**  
**EN55011 :** Class B conducted, Class B radiated  
**FCC :** Class B conducted, Class B radiated  
**VCCI :** Class B conducted, Class B radiated  
**EN61000-3-2 :** Harmonic distortion, Class A  
**EN61000-3-3 :** Line flicker  
**EN61000-4-2 :** ESD,  $\pm 8\text{KV}$  air and  $\pm 6\text{KV}$  contact  
**EN61000-4-3 :** Radiated immunity, 3V/m for 80-2500MHz  
**EN61000-4-4 :** Fast transient/burst,  $\pm 2\text{KV}$   
**EN61000-4-5 :** Surge,  $\pm 1\text{KV}$  diff,  $\pm 2\text{KV}$  com.  
**EN61000-4-6 :** Conducted immunity, 3Vrms  
**EN61000-4-8 :** Magnetic field immunity, 3A/m  
**EN61000-4-11 :** Voltage dips, 30% reduction for 500ms, 60% reduction for 100ms and  $>95\%$  reduction for 10ms

## OUTPUT VOLTAGE/CURRENT RATING CHART

Product No.	Output #1				Output #2				Output #3				Maximum Output Power
	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	
TMP55-S05	5-6V	0A	8.0A	5%			(N/A)				(N/A)		40W
TMP55-S06	6-8V	0A	7.5A	5%			(N/A)				(N/A)		45W
TMP55-S09	9-11V	0A	5.0A	5%			(N/A)				(N/A)		50W
TMP55-S12	11-13V	0A	4.6A	5%			(N/A)				(N/A)		55W
TMP55-S15	13-17V	0A	3.7A	3%			(N/A)				(N/A)		55W
TMP55-S19	17-21V	0A	3.1A	3%			(N/A)				(N/A)		55W
TMP55-S24	21-27V	0A	2.3A	3%			(N/A)				(N/A)		55W
TMP55-S30	27-33V	0A	1.9A	3%			(N/A)				(N/A)		55W
TMP55-S36	33-39V	0A	1.6A	3%			(N/A)				(N/A)		55W
TMP55-S48	48V	0A	1.2A	3%			(N/A)				(N/A)		55W
TMP55-D23	+5V	1A	5.0A	5%	+12V	0.5A	3.0A	5%			(N/A)		45W
TMP55-D24	+5V	1A	5.0A	5%	+15V	0.4A	2.5A	5%			(N/A)		45W
TMP55-D25	+5V	1A	5.0A	5%	+24V	0.3A	2.0A	5%			(N/A)		45W
TMP55-T31	+5V	1A	5.0A	5%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	45W
TMP55-T32	+5V	1A	5.0A	5%	+15V	0.4A	2.5A	5%	-15V	0.1A	0.5A	10%	45W

- Notes:
- (1) The output voltage of a single output model, except TMP55-S48, can be adjusted by user in the stated range, or set by factory to a wanted value in the range at the request of a user when ordering.
  - (2) The output voltages of a multiple output model may go outside of the stated tolerance when an output load current is out of stated limits. All models may be operated at no-load without damage.

## MECHANICAL SPECIFICATIONS



### NOTES:

1. Dimensions show in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 700 grams approx.
4. Standard output connector is a 5-pin at 180° male DIN plug. For other output connector options, please consult TRUMPower.
5. To order a model with on/off switch, add suffix "S", e.g. TMP55-S12-S

## PIN CHART

Product No.	PIN	1	2	3	4	5
		TMP55-S05 TMP55-S12 TMP55-S24 TMP55-S48	TMP55-S06 TMP55-S15 TMP55-S30	TMP55-S09 TMP55-S19 TMP55-S36	DC RETURN	DC RETURN
TMP55-D23	TMP55-D24	TMP55-D25	COMMOM RETURN	COMMOM RETURN	OUTPUT #1	COMMOM RETURN OUTPUT #2
TMP55-T31	TMP55-T32		COMMOM RETURN	COMMOM RETURN	OUTPUT #1	OUTPUT #3 OUTPUT #2

Tumbler Technologies + TRUMPower

3350 Scott Blvd., Bldg. 13, Santa Clara, California 95054, USA

Phone: 408-988-6616 • Fax: 408-988-6622 • email: sales@trumpower.com • Website: www.TRUMPower.com