



FEATURES

- Optional On/Off Switch
- Low Safety Ground Leakage Current
- Input Surge Current Protection
- Over-voltage, Over-current & Over-temperature Protections
- Medically Approved to the Latest Safety & EMC Standards
- CEC & Energy Star Level IV Compliance



INPUT SPECIFICATIONS

Input Voltage Range	85-264 VAC
Input Frequency	47-63 Hz
Input Current	1.22A rms max. @ 115 VAC, 0.68A rms max. @ 230 VAC
Inrush Current	50A @ 115 VAC or 100A @ 230 VAC, at 25°C cold start
Leakage Current	200 µA max. @ 115 VAC, 60Hz

OUTPUT SPECIFICATIONS

Output Power Ratings	See rating table
Minimum Load	See rating table
Tolerance, Output 1 & 2	±5%, except ±3% for 27V-50V
Output 3	±10%
Ripple and Noise*	2% peak-to-peak max. for 3.3V, 5V 1% peak-to-peak max. for 12V-48V
Overvoltage Protection	Output 1 only, set at 112-140% of its nominal output voltage
Overcurrent Protection	All outputs are protected to short-circuit conditions
Temperature Coefficient	±0.04%/°C max.
Transient Response	Max. excursion of 4% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

* Measured with 20MHz bandwidth at rated line voltage and output load ranges, with a 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor in parallel across the output.

GENERAL SPECIFICATIONS

Switching Frequency	40-130KHz
Efficiency, Single	85% min. @ full load
Dual/Triple	68-74% min. at full load
Hold-up Time	10ms @ 110 VAC
Line Regulation	±0.5% max. @ full load
Operating Temperature	0°C to +60°C
Derating	Derate from 100% at +40°C linearly to 50% at +60°C
Storage Temperature	-40°C to +85°C
Relative Humidity	5% to 95% non-condensing
Withstand Voltage	5,600 VAC input-output, 2,100 VAC input-ground, 700 VAC output-ground
MTBF	> 150,000 hours at full load, 25°C ambient, calculated per MIL-HDBK-217F

STANDARDS & COMPLIANCE

IEC/EN 60601-1-2: 2014	EMC & Immunity performance
EN 55011	Class B, conducted & radiated
FCC, VCCI	Class B, conducted & radiated
EN 61000-3-2	Harmonic distortion, Class A
EN 61000-3-3	Line fluctuations & flicker
EN 61000-4-2	ESD, ±15 KV air and ±8 KV contact
EN 61000-4-3	Radiated immunity, 10 V/m
EN 61000-4-4	Fast transient/burst, ±2 KV
EN 61000-4-5	Surge, ±1 KV diff., ±2 KV com.
EN 61000-4-6	Conducted immunity, 10 Vrms
EN 61000-4-8	Magnetic field immunity, 30 A/m
EN 61000-4-11	Voltage dip immunity, 30% reduction for 500ms, 100% reduction for 10ms
Safety Standards	UL/IEC/EN 60601-1 (Edition 3.1), ANSI/AAMI ES 60601-1 (2012), CSA C22.2 No. 60601-1 (2014)
Agency Approvals	UL, cUL, TUV, CE, CB
Other Compliance	RoHS, CEC & Energy Star Level IV

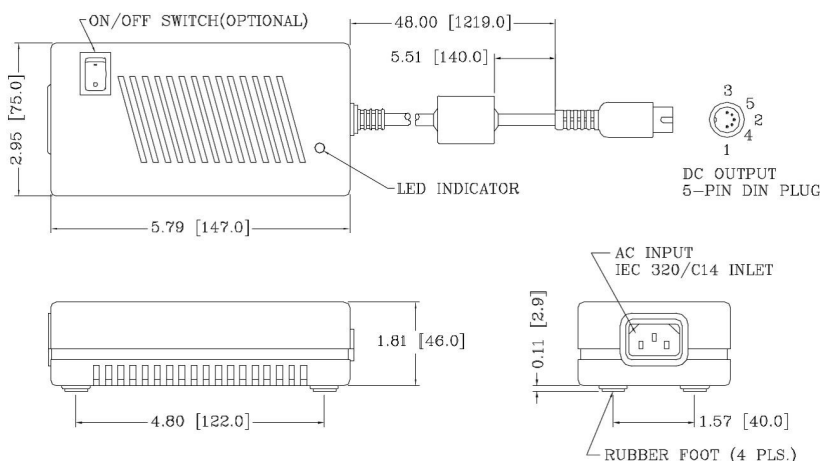
MODELS LIST

Product No.	OUTPUT #1			OUTPUT #2			OUTPUT #3			Max. Output Power
	Voltage	Min. Current	Max. Current	Voltage	Min. Current	Max. Current	Voltage	Min. Current	Max. Current	
TMP60-Sx	11-13V	0A	5.46A	-	-	-	-	-	-	60W
TMP60-Sx	13-17V	0A	4.62A	-	-	-	-	-	-	60W
TMP60-Sx	17-21V	0A	3.53A	-	-	-	-	-	-	60W
TMP60-Sx	21-27V	0A	2.86A	-	-	-	-	-	-	60W
TMP60-Sx	27-33V	0A	2.23A	-	-	-	-	-	-	60W
TMP60-Sx	33-39V	0A	1.82A	-	-	-	-	-	-	60W
TMP60-Sx	46-50V	0A	1.31A	-	-	-	-	-	-	60W
TMP60-D23	+5V	1A	5.0A	+12V	0.5A	3.0A	-	-	-	40W
TMP60-T30	+3.3V	1A	6.0A	+5V	0.5A	3.0A	+12V	0.1A	0.7A	30W
TMP60-T31	+5V	1A	5.0A	+12V	0.5A	3.0A	-12V	0.1A	0.7A	40W
TMP60-T32	+5V	1A	5.0A	+15V	0.4A	2.3A	-15V	0.1A	0.7A	40W
TMP60-T36	+5V	1A	5.0A	+24V	0.3A	1.5A	+12V	0.1A	0.7A	40W

Notes:

- 1) For single output models, specify the output voltage when ordering, e.g. TMP60-S12 for 12V, TMP60-S19.5 for 19.5V, etc.
- 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.
- 3) To order a model with on/off switch, add suffix "S" to the model number, e.g. TMP60-S30-S.

MECHANICAL SPECIFICATIONS



DC OUTPUT CONNECTOR			
PIN	SINGLE	DUAL	TRIPLE
1	RETURN	COMMON RETURN	COMMON RETURN
2	RETURN	COMMON RETURN	COMMON RETURN
3	OUTPUT	OUTPUT #1	OUTPUT #1
4	RETURN	N.C.	OUTPUT #3
5	OUTPUT	OUTPUT #2	OUTPUT #2
SHELL	AC GROUND		

Notes:

- 1) Dimensions shown in inches (mm)
- 2) Tolerance 0.02 (0.5) maximum
- 3) Standard output connector is 5-pin DIN plug, mating with Switchcraft P/N 57GB5F receptacle or equivalent. Contact TRUMPower for output connector options.
- 4) Weight: 600 grams (1.22 lbs.) approx.
- 5) Standard model comes with AC and DC Grounds separated. Connected grounds available upon request.