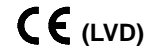


DESCRIPTION

The TMP120 series of AC/DC switching power adapters are for 96 to 120 watts of continuous output power. They are enclosed in a 94V-1 rated case with an IEC 320/C14 or C18 inlet to mate with interchangeable AC power cord for world-wide use. All models meet CISPR 11 and FCC class B emission limits, and are designed for medical applications.

TMP120 SERIES
Class I, Class II



RoHS

FEATURES

- Low safety ground leakage current
- Optional output connectors
- 100% burn-in
- 90 to 264VAC wide input range
- Overvoltage and overcurrent protections
- Optional IEC 320/C18 inlet with class II insulation
- Compliant with CEC and Energy Star efficiency level IV requirements
- No load power consumption less than 0.5W
- Average active efficiency $\geq 85\%$
- Compliant with RoHS requirements

Safety Standard Approvals :



UL 60601-1
CSA C22.2 No. 601.1



TÜV EN60601-1



INPUT SPECIFICATIONS

Input voltage :	90 to 264VAC
Input frequency :	47 to 63Hz
Input current :	1.60A (rms) for 115 VAC 0.80A (rms) for 230 VAC
Earth leakage current : (Class I)	90 μ A max. @ 115 VAC/60Hz 150 μ A max. @ 230 VAC/50Hz
Enclosure leakage current: (Class II)	90 μ A max. @ 264 VAC/50Hz

OUTPUT SPECIFICATIONS

Output voltage/current :	See rating chart
Total output power :	120 watts maximum
Ripple and noise :	2% peak to peak maximum
Overvoltage protection :	Provided on output #1 only; set at 112 -140% 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 500 μ s after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature :	0 $^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$
Storage temperature :	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Relative humidity :	5% to 95% non-condensing
Derating :	Derate from 100% at +40 $^{\circ}\text{C}$ linearly to 50% at +60 $^{\circ}\text{C}$

GENERAL SPECIFICATIONS

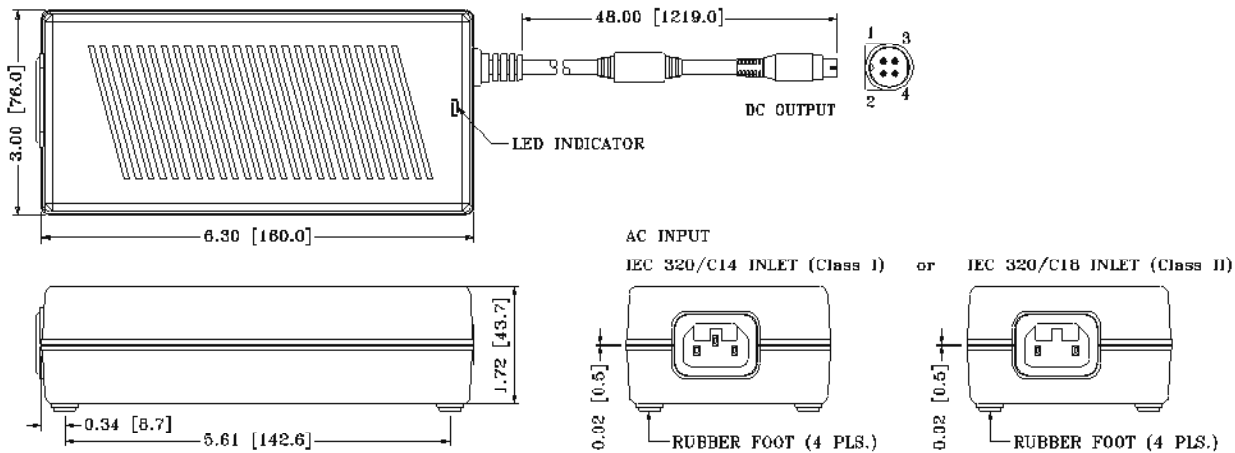
Switching frequency :	50KHz ~ 110KHz
Power factor :	0.98 typical at 115VAC 85% min.
Efficiency :	85% min.
Hold-up time :	15 msec minimum at 115VAC
Line regulation :	$\pm 0.5\%$ maximum at full load
Inrush current :	60 amps @ 115VAC or 90 amps @230VAC, at 25 $^{\circ}\text{C}$ cold start
Withstand voltage :	4000VAC from input to output 1500VAC from input to ground 500VAC from output to ground
MTBF :	150,000 hours minimum at full load at 25 $^{\circ}\text{C}$ 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 and D
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
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.	Vnom.	Output			Tol.	Maximum Output Power
		Imin.	Imax.			
TMP120-12	12V	0A	8.0A		5%	96W
TMP120-15	15V	0A	7.0A		5%	105W
TMP120-18	18V	0A	6.67A		5%	120W
TMP120-19	19V	0A	6.32A		5%	120W
TMP120-20	20V	0A	6.0A		5%	120W
TMP120-24	24V	0A	5.0A		5%	120W
TMP120-30	30V	0A	4.0A		5%	120W
TMP120-36	36V	0A	3.34A		5%	120W
TMP120-48	48V	0A	2.5A		5%	120W

- NOTES:
1. Ripple and noise: Peak-to-peak with 20MHz bandwidth and 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor at rated line voltage and load ranges.
 2. To order a model with IEC320/C18 inlet and class II insulation, add "C2", e.g. TMP120-12-C2.

MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 780 grams approx.
4. Standard output connector is a male 4-pin power DIN. Please consult TRUMPower for other connector options
5. TMP120-12 and TMP120-15 output connectors are without lock.

PIN CHART

Product No.	PIN	1	2	3	4	Shell
		TMP120-12	TMP120-15	Return	Output +V	Return
TMP120-18	TMP120-19					
TMP120-20	TMP120-24					
TMP120-30	TMP120-36					
TMP120-48						