TRUMPower

TMP220 Series

200-220 Watts Medical & ITE Power Adapters

FEATURES

- Class I (C14 Inlet) & Calss II (C8 Inlet)
- 0.95 Active Power Factor
- 87% Minimum Efficiency
- Medical & ITE Dual Approvals
- Short-Circuit, OVP, OLP, and OTP Protections
- Standby Power Consumption < 0.5W
- CEC & Energy Star Level V Compliance
- 100% Burn-In at Full Rated Load

INPUT SPECIFICATIONS

Input Voltage Range	90~264 VAC
Input Frequency	47~63Hz
Input Current	3.0A rms @ 115 VAC
	1.5A rms @ 230 VAC
Touch Current	100μA max. @ 264 VAC, 60Hz
Earth Leakage Current	300μA max. @ 264 VAC, 60Hz

OUTPUT SPECIFICATIONS

Output Power Ratings	See table
Tolerance	±5%
Ripple and Noise*	280mV peak to peak max.
Overvoltage Protection	Set at 110-130% of its nominal output voltage
Overcurrent Protection	Protected 110-120% of full load conditions
Transient Response	+4% max. excursion, Recovering to 1% of final value within 500μs after a 25% load change

* Measured with 20MHz bandwidth at rated line voltage and output load ranges, with a 47μF electrolytic capacitor in parallel with a 0.1μF ceramic capacitor across the output.

GENERAL SPECIFICATIONS

Power Factor	0.95 typical
Efficiency	87% min. at 100 VAC or 240 VAC
Hold-up Time	12ms min. at 100 VAC
Turn-on Delay Time	3 sec. max. at 100 VAC
Line Regulation	±0.5% max. at full load
Operating Temperature	0˚C to +40˚C
Storage Temperature	-20˚C to +80˚C
Relative Humidity	10% to 90% non-condensing
Withstand Voltage	4000 VAC from input to output, 1500 VAC from input to ground
MTBF	125K hours minimum at full load, 25˚C ambient, calculated per MIL-HDBK-217F

STANDARDS & COMPLIANCES

IEC/EN 61000-1-2	EMC & Immunity Performance
EN 55011, EN 55022	Class B, conducted & radiated
FCC, VCCI	Class B, conducted & radiated
EN 61000-3-2	Harmonic distortion, Class A & D
EN 61000-3-3	Line flicker
EN 61000-4-2	ESD, ±8 KV air and ±6 KV contact
EN 61000-4-3	Radiated immunity, 3V/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, 3 Vrms
EN 61000-4-8	Magnetic field immunity, 3A/m
EN 61000-4-11	Voltage dips, 30% reduction for 500ms, 60% reduction for 100ms, >95% reduction for 10ms
Safety Standards	IEC/EN/UL 60601-1 3rd Ed. ANSI/AAMI ES 60601-1:2005, CSA C22.2 No. 60601-1:08, IEC/EN 60950-1 2nd Ed.
Agency Approvals	UL, cUL, TUV, CE, CB
Other Compliances	RoHS, CEC & Energy Star Level V

MODELS LIST

Product No.	Class	Output Voltage	Maximum Load	Maximum Output Power
TMP220-19	I	19V	10.53A	200W
TMP220-24	I	24V	9.17A	220W
TMP220-28	I	28V	7.86A	220W
TMP220-19-C2	II	19V	10.53A	200W
TMP220-24-C2	II	24V	9.17A	220W
TMP220-28-C2	II	28V	7.86A	220W

Note:
1) Class I models are equipped with IEC320/C14 AC inlet.
2) Class II models are equipped with IEC320/C8 AC inlet.

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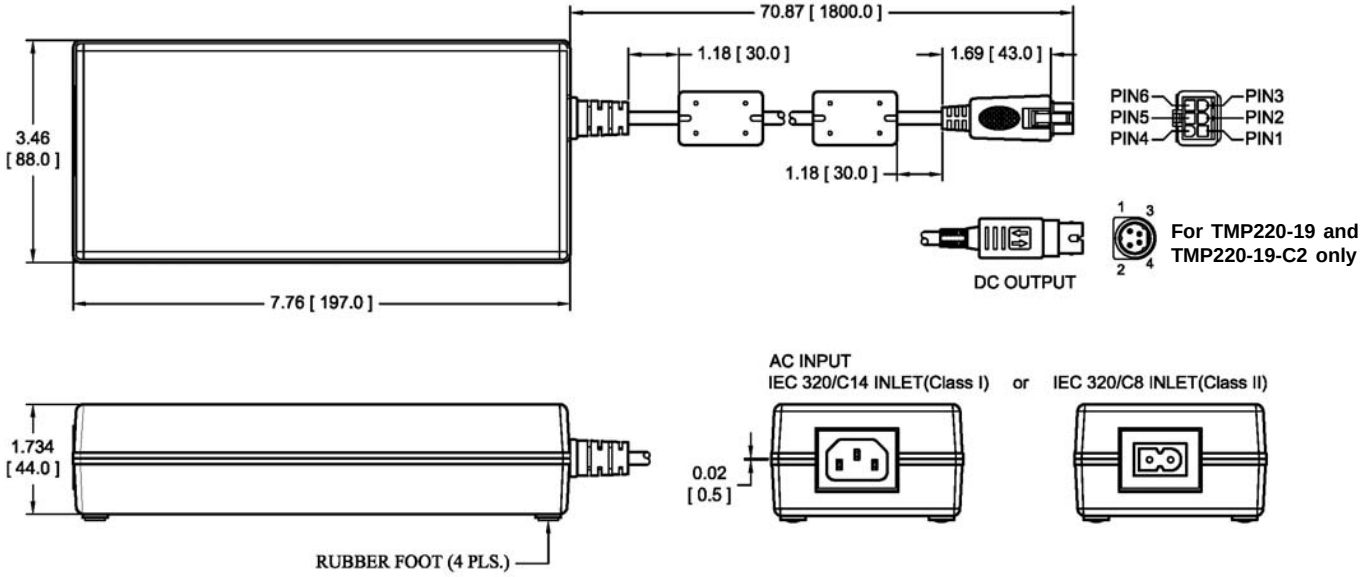
MECHANICAL SPECIFICATIONS



Unit: inch [mm]
Tolerance: 0.02 [0.5] maximum
Weight: 1.0 kg (2.2 lbs.) approx.

STANDARD DC OUTPUT CONNECTOR	
PIN	**FUNCTION**
1	+V
2	DC RETURN
3	DC RETURN
4	+V
5	+V
6	DC RETURN

TMP220-19 & TMP220-19-C2 DC OUTPUT CONNECTOR	
PIN	**FUNCTION**
1	+V
2	+V
3	DC RETURN
4	DC RETURN
SHELL	AC GND / *NC
*Shell is NC on Class II models	

Notes:

1. Standard output connector: Molex Mini-Fit receptacle, P/N 39-01-2060 with female terminal #5556 or equivalent.
   Mating connector: Molex plug 39-01-2066 and male terminal #5558, #5566, #5569 or equivalent.
2. Output connector for TMP220-19 and TMP220-19-C2: Kycon P/N KPPX-4P 4-pin circular DIN or equivalent.
   Mating connector: Kycon P/N KPJX-4S-S or equivalent.
3. Contact TRUMPower for output connector options.

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