



**FEATURES**

- Class I (C14 Inlet) & Class 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**

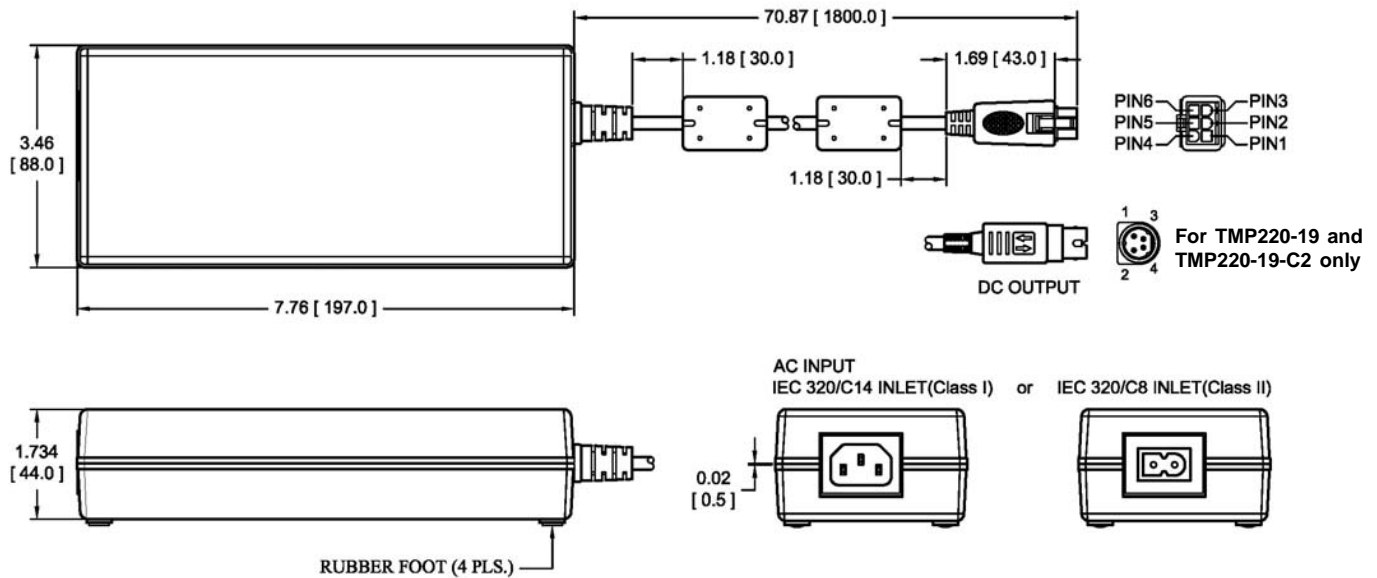
IEC/EN 61000-1-2 ..... EMC & Immunity Performance  
 EN 55011, EN 55022 ..... Class B, conducted & radiated  
 FCC, VCCI ..... Class B, conducted & radiated  
 EN 61000-3-2 ..... Harmonic distortion, Class A & D  
 EN 61000-3-3 ..... Line flicker  
 EN 61000-4-2 ..... ESD, ±8 KV air and ±6 KV contact  
 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
<b>TMP220-19</b>	<b>I</b>	19V	10.53A	200W
<b>TMP220-24</b>	<b>I</b>	24V	9.17A	220W
<b>TMP220-28</b>	<b>I</b>	28V	7.86A	220W
<b>TMP220-19-C2</b>	<b>II</b>	19V	10.53A	200W
<b>TMP220-24-C2</b>	<b>II</b>	24V	9.17A	220W
<b>TMP220-28-C2</b>	<b>II</b>	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.

### 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:

- 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.
- 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.
- Contact TRUMPower for output connector options.