TMP220 Series
200-220 Watts Medical & ITE Power Adapters

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

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

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Class</th>
<th>Output Voltage</th>
<th>Maximum Load</th>
<th>Maximum Output Power</th>
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<tbody>
<tr>
<td>TMP220-19</td>
<td>I</td>
<td>19V</td>
<td>10.53A</td>
<td>200W</td>
</tr>
<tr>
<td>TMP220-24</td>
<td>I</td>
<td>24V</td>
<td>9.17A</td>
<td>220W</td>
</tr>
<tr>
<td>TMP220-28</td>
<td>I</td>
<td>28V</td>
<td>7.86A</td>
<td>220W</td>
</tr>
<tr>
<td>TMP220-19-C2</td>
<td>II</td>
<td>19V</td>
<td>10.53A</td>
<td>200W</td>
</tr>
<tr>
<td>TMP220-24-C2</td>
<td>II</td>
<td>24V</td>
<td>9.17A</td>
<td>220W</td>
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<td>TMP220-28-C2</td>
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<td>28V</td>
<td>7.86A</td>
<td>220W</td>
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</table>

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.

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<th>PIN</th>
<th>FUNCTION</th>
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<tbody>
<tr>
<td>1</td>
<td>+V</td>
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<tr>
<td>2</td>
<td>DC RETURN</td>
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<tr>
<td>3</td>
<td>DC RETURN</td>
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<tr>
<td>4</td>
<td>+V</td>
</tr>
<tr>
<td>5</td>
<td>+V</td>
</tr>
<tr>
<td>6</td>
<td>DC RETURN</td>
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</tr>
<tr>
<td>5</td>
<td>AC GND / *NC</td>
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</table>

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.
   Mating connector: Kycon P/N KPJX-4S-S or equivalent.
3. Contact TRUMPower for output connector options.