TMP105 Series
90-105 Watts Medical & ITE Power Adapters

FEATURES
- 90 to 264 VAC Input, Soft Start
- 12 to 50 VDC Output Voltages
- High Peak Power
- 0.98 Power Factor
- 87% to 91% Efficiency
- Low Safety Ground Leakage Current
- IEC 320/C14 (Class I), IEC 320/C8P (Class II) Inlets

INPUT SPECIFICATIONS
- Input Voltage Range .......... 90-264 VAC
- Input Frequency ................. 47-63Hz
- Input Current ..................... 1.4A rms @ 115 VAC
- 0.7A rms @ 230 VAC
- Inrush Current ................. 80A @ 115 VAC or 120A @ 230 VAC, at 25°C cold start
- Soft Start ......................... Yes
- Earth Leakage Current .......... 200 µA max. @ 264 VAC, 63Hz
- Touch Current .................... 100 µA max. @ 264 VAC, 63Hz

OUTPUT SPECIFICATIONS
- Output Power Ratings .......... See table
- Minimum Load ..................... Not required
- Tolerance ......................... ±5%
- Ripple and Noise* .............. 1% peak to peak max. at full load
- Overvoltage Protection ......... Set at 115-140% of its nominal output voltage
- Overcurrent Protection .......... 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 µs after a 25% step load change

GENERAL SPECIFICATIONS
- Power Factor ..................... 0.98 typical @ 115 VAC
- Efficiency ......................... 87% min. @ full load
- Hold-up Time ..................... 10ms @ 110 VAC
- Switching Frequency .......... 70-140 kHz
- 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 ............... 5,800 VDC input-output (2MOPP)
- 4,000 VAC for Class II models),
- 2,100 VDC input-ground (1MOPP),
- 700 VDC output-ground
- MTBF ............................. 150K hours minimum at full load,
- 25°C ambient, calculated per MIL-HDBK-217F

MODELS LIST

<table>
<thead>
<tr>
<th>Product No. (1)</th>
<th>Output Voltage</th>
<th>Maximum Current</th>
<th>Peak Current</th>
<th>Maximum Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP105-12</td>
<td>12V</td>
<td>7.5A</td>
<td>15A</td>
<td>90W</td>
</tr>
<tr>
<td>TMP105-13</td>
<td>13V</td>
<td>6.93A</td>
<td>13.8A</td>
<td>90W</td>
</tr>
<tr>
<td>TMP105-15</td>
<td>14~16V</td>
<td>6.79A</td>
<td>13.58A</td>
<td>95W</td>
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<tr>
<td>TMP105-18</td>
<td>18~19V</td>
<td>5.84A</td>
<td>11.6A</td>
<td>105W</td>
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<tr>
<td>TMP105-20</td>
<td>20~21V</td>
<td>5.25A</td>
<td>10.5A</td>
<td>105W</td>
</tr>
<tr>
<td>TMP105-24</td>
<td>24~25V</td>
<td>4.38A</td>
<td>8.7A</td>
<td>105W</td>
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<tr>
<td>TMP105-28</td>
<td>28~29V</td>
<td>3.75A</td>
<td>4.5A</td>
<td>105W</td>
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<tr>
<td>TMP105-30</td>
<td>30~32V</td>
<td>3.5A</td>
<td>4.2A</td>
<td>105W</td>
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<tr>
<td>TMP105-36</td>
<td>36~38V</td>
<td>2.92A</td>
<td>3.5A</td>
<td>105W</td>
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<tr>
<td>TMP105-48</td>
<td>46~50V</td>
<td>2.29A</td>
<td>2.7A</td>
<td>105W</td>
</tr>
</tbody>
</table>

STANDARDS & COMPLIANCES

IEC/EN 60601-1-2: 2014 .. 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 fluctuations & flicker
EN 61000-4-2 ................. ESD, ±15 KV air and ±8 KV contact
EN 61000-4-3 ................. Radiated immunity, 10V/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, 6Vrms
EN 61000-4-8 ................. Magnetic field immunity, 30A/m
EN 61000-4-11 ............... Voltage dip immunity,
- 30% reduction for 500ms,
- 60% reduction for 100ms,
- >95% 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);
UL/IEC/EN 60950-1 (2nd Edition),
CSA C22.2 No. 60950-1 (2nd Edition)

Agency Approvals ............... UL, cUL, TUV/GS, CE, CB
Other Compliance ............. RoHS, CEC & Energy Star Level V

Notes:
1) The listed P/Ns are for Class I models equipped with IEC 320/C14 AC inlet.
Add suffix “C2” to order Class II models equipped with IEC 320/C8P AC inlet.
When ordering 14-50V output units, specify the requested voltage, e.g. use P/N TMP105-19.5-C2 to order 19.5V Class II model.
2) The peak current is for 10 seconds maximum with the average power not over the maximum power.
Notes:
1. Unit: inch [mm]
2. Tolerance: 0.02 [0.5] maximum
3. Weight: 681g (1.505 lbs.) approx.
4. Output connector: Kycon P/N KPPX-4P circular DIN connector or equivalent
5. Mating connector: Kycon P/N KPJX-4S-S or equivalent
6. Contact TRUMPower for output connector options.
7. The output cable on 12V to 16V output models is 37.4 inches (950mm) long so as to meet CEC efficiency Level V requirements.