DESCRIPTION
The TMP150 is a series of medical grade, class I and class II, AC/DC desktop power adapters of 132 to 150 watts output power. They are enclosed in a 94V-1 rated case with an IEC 320/C14 or IEC 320/C18 AC inlet to mate with interchangeable cord for world-wide use. All models meet CISPR 11 and FCC class B emission limits, and are designed for medical applications.

FEATURES
- Low safety ground leakage current
- Optional output connectors
- 100% burn-in
- 90 to 264VAC wide input range
- Overvoltage & overcurrent protections
- 0.98 PFC
- Compliant with CEC and Energy Star efficiency level IV requirements
- No load consumption less than 0.5W
- Average active efficiency ≥ 85%
- Compliant with RoHS requirements

INPUT SPECIFICATIONS
- Input voltage: 90 to 264VAC
- Input frequency: 47 to 63Hz
- Input current: 2.0A (rms) for 115VAC, 1.0A (rms) for 230VAC
- Earth leakage current: 90µA max. @ 115VAC, 60Hz (Class I)
- Enclosure leakage current: 150µA max. @ 230VAC, 50Hz (Class I)

OUTPUT SPECIFICATIONS
- Output voltage/current: See rating chart
- Total output power: See rating chart
- Ripple and noise: 2% peak to peak maximum
- Overvoltage protection: Set at 112 – 140% of its nominal output voltage
- Overcurrent protection: All outputs protected to short circuit conditions
- Temperature coefficient: All outputs ±0.04%/°C maximum
- Transient response: Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500µs after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS
- Operating temperature: 0°C to +60°C
- Storage temperature: -40°C to +85°C
- Relative humidity: 5% to 95% non-condensing
- Derating: Derate from 100% at +40°C linearly to 50% at +60°C

GENERAL SPECIFICATIONS
- Switching frequency: 30KHz ~ 110KHz
- Power factor: 0.98 typical at 115VAC
- Efficiency: 85% min.
- Hold-up time: 15 msec minimum at 110VAC
- Line regulation: ±0.5% maximum at full load
- Inrush current: 60 amps @ 115VAC or 100 amps @ 230VAC, at 25°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
- EMC Performance:
  - 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 D
  - EN61000-3-3: Line flicker
  - EN61000-4-2: ESD, ±8KV air and ±6KV contact
  - EN61000-4-3: Radiated immunity, 3V/m
  - EN61000-4-4: Fast transient/burst, ±2KV
  - EN61000-4-5: Surge, ±1KV diff, ±2KV 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

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>TMP150-12</td>
<td>12.0V</td>
<td>0A</td>
<td>11.0A</td>
<td>5%</td>
<td>132W</td>
</tr>
<tr>
<td>TMP150-15</td>
<td>15.0V</td>
<td>0A</td>
<td>9.0A</td>
<td>5%</td>
<td>135W</td>
</tr>
<tr>
<td>TMP150-19</td>
<td>19.0V</td>
<td>0A</td>
<td>7.90A</td>
<td>5%</td>
<td>150W</td>
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<tr>
<td>TMP150-24</td>
<td>24.0V</td>
<td>0A</td>
<td>6.25A</td>
<td>5%</td>
<td>150W</td>
</tr>
<tr>
<td>TMP150-27</td>
<td>27.0V</td>
<td>0A</td>
<td>5.56A</td>
<td>5%</td>
<td>150W</td>
</tr>
<tr>
<td>TMP150-48</td>
<td>48.0V</td>
<td>0A</td>
<td>3.13A</td>
<td>5%</td>
<td>150W</td>
</tr>
</tbody>
</table>

**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 “Class II” model with IEC320/C18 inlet, add suffix “C2”, e.g. TMP150-24-C2.

### MECHANICAL SPECIFICATIONS

![Mechanical Diagram]

**NOTES:**
1. Dimensions show in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 960 grams approx.
4. Standard output connector is a male 4-pin power DIN. Please consult TRUMPower for other connector options.
5. TMP150-12, -15, -19 output connectors are without lock. TMP150-24, -27, -48 output connectors are with lock.

### PIN CHART

<table>
<thead>
<tr>
<th>Product No.</th>
<th>PIN</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Shell</th>
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<tbody>
<tr>
<td>TMP150-12</td>
<td>TMP150-15</td>
<td>Return</td>
<td>Output +V</td>
<td>Return</td>
<td>Output +V</td>
<td>AC Ground</td>
</tr>
<tr>
<td>TMP150-19</td>
<td>TMP150-24</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TMP150-27</td>
<td>TMP150-48</td>
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</tr>
</tbody>
</table>

*Add suffix “C2” when ordering “Class II” units with IEC 320/C18 inlet.*

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