**TTM305 Series**

**305 Watts AC/DC Medical & ITE Grade Power Supplies**

**FEATURES**
- 5" x 3" x 1.5" Footprint
- 12V/24V/48V Output with 5V/1A Standby Power
- 2 X MOPP
- Remote On/Off Control
- Medical & ITE Dual Approvals

**INPUT SPECIFICATIONS**
- Input Voltage Range ............. 90-264 VAC
- Input Frequency .................... 47-63 Hz
- Input Current ......................... 3.6A rms max. @ full load
- Inrush Current ...................... 100A @ full load, at 25°C cold start
- Earth Leakage Current ......... 230 µA max. @ 264 VAC, 63Hz
- Touch Current ....................... 60 µA max. @ 264 VAC, 63Hz
- No Load Power Cons. .......... 0.21W max.

**OUTPUT SPECIFICATIONS**
- Output Power Ratings .......... See table
- Output Voltage ...................... See table
- Load Regulation ....................... ±5% typical
- Ripple and Noise* .............. 1% Vp-p max. for main output
- Over Voltage Protection ...... Shut down
- Over Current Protection ...... Shut down, Auto-recovery
- Short Circuit Protection ...... Shut down, Auto-recovery
- Temperature Coefficient ...... ±0.04%/°C max.
- Transient Response .......... 0.5 ms for 50% load change, typ.
- Standby Power ....................... 5V/1A
- Fan Power ......................... 12V/0.3A or 24V/0.2A max.

*Peak to peak with 20MHz bandwidth and a 47µF low ESR electrolytic capacitor in parallel with a 0.1µF multilayer capacitor at nominal line voltage and full load.

**STANDARDS & COMPLIANCE**
- IEC/EN 60601-1-2, 4th Ed. ....... EMC & Immunity Performance
- EN 55011 .............................. Class B, conducted & radiated
- FCC, CISPR11 .......................... Class B, conducted & radiated
- EN61000-3-2 ........................... Harmonic distortion, Class A & D
- EN61000-3-3 ........................... Line flicker
- EN61000-4-2 ........................... ESD, ±15 KV air and ±8 KV contact
- EN61000-4-3 ........................... Radiated immunity, 3V/m
- EN61000-4-4 ........................... Fast transient/burst, ±2 KV
- EN61000-4-5 ........................... Surge, ±1 KV diff., ±2 KV com.
- EN61000-4-6 ........................... Conducted immunity, 3 Vrms
- EN61000-4-8 ........................... Magnetic field immunity, 3A/m
- EN61000-4-11 ....................... Voltage dip immunity,
- 30% reduction for 500 ms,
- 60% reduction for 100 ms,
- >95% reduction for 10 ms
- Safety Standards ..................... IEC/EN 60601-1 (Edition 3.1)
- ANSI/AAMI ES 60601-1:2012
- CSA C22.2 No. 60601-1:2014
- IEC/EN/UL 60950-1 (2nd Edition)
- IEC/EN/UL 62368-1
- Agency Approvals ................. UL, cUL, TUV, CB, CE
- Other Compliance ................. RoHS, CEC, DoE level VI,
- ErP Stage 2

**MODELS LIST**

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Voltage</th>
<th>@Convection Power</th>
<th>@11 CFM Forced Air Power</th>
<th>Ripple &amp; Noise*</th>
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<tbody>
<tr>
<td>TTM305-12</td>
<td>12V</td>
<td>16A</td>
<td>197W</td>
<td>120mV</td>
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<td>5Vsb</td>
<td>1A</td>
<td>1A</td>
<td>100mV</td>
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<tr>
<td>TTM305-24</td>
<td>24V</td>
<td>19.4</td>
<td>255W</td>
<td>240mV</td>
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<tr>
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<td>5Vsb</td>
<td>1A</td>
<td>1A</td>
<td>100mV</td>
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<tr>
<td>TTM305-48</td>
<td>48V</td>
<td>5.2A</td>
<td>255W</td>
<td>480mV</td>
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<tr>
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<td>5Vsb</td>
<td>1A</td>
<td>1A</td>
<td>100mV</td>
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</table>

**GENERAL SPECIFICATIONS**
- Switching Frequency ............. 100 kHz
- Power Factor ......................... 0.95 min.
- Efficiency ......................... 90% min. @ full load
- Hold-up Time ......................... 10 ms min. @ full load
- Operating Temperature ........ 0°C to +70°C
- Derating ......................... See chart
- Storage Temperature ............ -20°C to +80°C
- Operating Humidity ............ 20% to 80% non-condensing
- Storage Humidity ............ 10% to 90% non-condensing
- Withstand Voltage ............... 4,000 VAC, input-output (2 MOPP)
- 1,500 VAC, input-ground (1 MOPP)
- 1,500 VAC, output-ground
- MTBF .................................. 300K hours minimum at full load,
- 25°C ambient, calculated per
- Telcodia SR-332

**POWER DERATING CHART**
MECHANICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>PIN</th>
<th>FUNCTION (12V, 24V Output)</th>
<th>FUNCTION (48V Output)</th>
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<tbody>
<tr>
<td>CN1</td>
<td>1</td>
<td>NEUTRAL</td>
<td>NEUTRAL</td>
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<tr>
<td></td>
<td>2</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>LINE</td>
<td>LINE</td>
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<tr>
<td>CN2</td>
<td>1</td>
<td>*FAN POWER</td>
<td>*FAN POWER</td>
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<td>2</td>
<td>VO-</td>
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<td>+5V STANDBY</td>
<td>+5V STANDBY</td>
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<td>VO-</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>REMOTE ON/OFF</td>
<td>REMOTE ON/OFF</td>
</tr>
</tbody>
</table>

*Fan Power: +12VDC/0.3A for 12V and 48V output, +24VDC/0.2A for 24V output

NOTES:
1. Dimensions: mm [inches]
2. Tolerance: ±0.1 mm unless otherwise stated
3. CN1: JST P/N B2P3-VH 2 pins wafer 7.92 mm pitch; Mating connector: JST P/N VAR-2
4. CN2: JST P/N B2B-PH-K-S 2 pins wafer 2.0 mm pitch; Mating connector: JST P/N JST PHR-2
5. CN3 for 12V/24V output: JST P/N B6P-VH 6 pins wafer 3.96 mm pitch; Mating connector: JST P/N VHR-6N
6. CN3 for 48V output: JST P/N B4P-VH 4 pins wafer 3.96 mm pitch; Mating connector: JST P/N VHR-4N
7. CN3S: JST P/N S6B-XH-A 3 pins wafer 2.5mm pitch; Mating connector: JST P/N JST XHP-3
8. Weight: 360g (0.79 lbs.) approx.