TC65 Series
65 Watts ITE AC/DC Switching Power Supplies

FEATURES

• Convection-Cooled 65 Watts in 2” x 3” Footprint
• Latest IEC/UL 62368-1 Approvals
• No Load Power Consumption < 0.15W
• 100-240VAC Universal Input

INPUT SPECIFICATIONS

Input Voltage Range ............ 100~240 VAC
Input Frequency ................... 50~60 Hz
Input Current ........................1.6A max.
Inrush Current ......................80A max. @ 240 VAC, at 25°C cold start
Earth Leakage Current .........250 µA max.

OUTPUT SPECIFICATIONS

Output Voltage/Current ........See models list
Load Regulation ..................±5% typ. @ full load
No Load Power Cons. ..........0.15W max.
Ripple and Noise* ..............1% Vp-p max. of the output voltage
Over Voltage Protection ......Shut down
Short Circuit Protection ......Shut down, Auto-recovery
Over Current Protection ......Shut down, Auto-recovery
Temperature Coefficient ......±0.04%/ max.
Transient Response ..........0.5 mS @ 50% load change

*Measured with 20MHz bandwidth at rated line voltage and output load ranges, with a 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor across the output.

GENERAL SPECIFICATIONS

Switching Frequency ............ 65 KHz
Efficiency ............................. 89% min. @ full load
Hold-up Time .................... 10 mS min. @ full load
Operating Temperature ...........0°C to +70°C
Storage Temperature .............-20°C to +80°C
Operating Humidity .............20% to 80%, non-condensing
Storage Humidity ...............10% to 90%, non-condensing
Derating .......................... Derate from 100% at +50°C linearly to 50% at +70°C
Cooling ......................... Convection
Withstand Voltage ............... 3,000 VAC, input-output
MTBF ................................. 300K hours minimum at full load, 25°C ambient, calculated per Telcordia SR-332

STANDARDS & COMPLIANCES

EN55011, EN55022 .......... Class B conducted and radiated
FCC, VCCI ....................... Class B conducted and 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 dip immunity,
.......................... 30% reduction for 500ms,
.......................... 60% reduction for 100ms,
.......................... >95% reduction for 10ms
Safety Standards ............. IEC/UL 62368-1 (3rd Edition),
.......................... CSA C22.2 No. 62368-1
Agency Approvals ............. UL, cUL, CE, CB
Other Compliances .......... RoHS, DOE Level VI, ErP Stage II

MODELS LIST

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
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<tbody>
<tr>
<td>TC65-05</td>
<td>5V</td>
<td>10A</td>
<td>50W</td>
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<tr>
<td>TC65-09</td>
<td>9V</td>
<td>7.2A</td>
<td>65W</td>
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<td>TC65-12</td>
<td>12V</td>
<td>5.42A</td>
<td>65W</td>
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<td>TC65-15</td>
<td>15V</td>
<td>4.34A</td>
<td>65W</td>
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<tr>
<td>TC65-19</td>
<td>19V</td>
<td>3.43A</td>
<td>65W</td>
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<tr>
<td>TC65-24</td>
<td>24V</td>
<td>2.71A</td>
<td>65W</td>
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<td>TC65-48</td>
<td>48V</td>
<td>1.36A</td>
<td>65W</td>
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**MECHANICAL SPECIFICATIONS**

**INPUT CONNECTOR (CN1)**

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<td>2</td>
<td>NULL</td>
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<td>3</td>
<td>NEUTRAL</td>
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**OUTPUT CONNECTOR (CN2)**

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<tbody>
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<td>1</td>
<td>RTN</td>
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<tr>
<td>2</td>
<td>RTN</td>
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<tr>
<td>3</td>
<td>+V</td>
</tr>
<tr>
<td>4</td>
<td>+V</td>
</tr>
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</table>

**NOTES:**
1. Dimensions: inches [mm]
2. Tolerance: 0.02 [0.5] maximum
3. Connector CN1: JST B2P3-VH or equivalent, mating with JST VAR-2 or equivalent.
4. Connector CN2: JST B4P-VH or equivalent, mating with JST VHR-4N or equivalent.
5. Weight: 100 grams (0.22 lbs.) approx.