FEATURES
- 12V to 48V Single Output Voltages
- IEC 320/C6, C8, C14 & C18 AC Inlets
- LED Power Indicator
- Class I & II with 2 X MOPP
- Medical & ITE Dual Approvals
- CEC, DOE Level VI & ErP Stage 2 Compliant
- UL, cUL, TUV, PSE, CCC, CB & CE Approved

INPUT SPECIFICATIONS
Input Voltage Range .............. 90-264 VAC
Input Frequency ..................... 47-63 Hz
Input Current .......................... 1.2A  rms @ 115 VAC
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...............................................
0.5A  rms @ 230 VAC
Inrush Current ........................ 80A @ 230 VAC, at 25°C cold start
Touch Current ......................... 100 µA max. @ 240 VAC
Earth Leakage Current ........ 300 µA max. @ 240 VAC (Class I)

OUTPUT SPECIFICATIONS
Output Power Ratings ........... See table
No Load Power Cons. .......... 0.15W max.
Line Regulation ..................... ±1% max.
Load Regulation .................... ±5% max.
Ripple and Noise* .............. 2% Vp-p max. of output voltage
Overvoltage Protection ...... Set at 150% of its nominal output voltage; Latch off
Over Temp. Protection ....... Shutdown; Auto recovery
Short Circuit Protection ...... Shutdown; Auto recovery
Overcurrent Protection ....... Set at 170% of its nominal input voltage; Shutdown
Temperature Coefficient ...... ±0.04%/°C 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 in parallel across the output.

GENERAL SPECIFICATIONS
Power Factor ....................... 0.9 typical
Efficiency .............................. 87% min. @ full load
Hold-up Time ......................... 10 ms @ full load
Operating Temperature ...... 0°C to +40°C
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)
MTBF .................................. 300 Khrs minimum at full load,
...............................................
...............................................
25°C ambient, calculated per

STANDARDS & COMPLIANCE
IEC/EN 60601-1-2 4th Ed. ...... EMC & Immunity Performance
EN 55011 & FCC .............. Class B, conducted & radiated
EN 61000-3-2 .................. Harmonic distortion, Class A & D
EN 61000-3-3 .................. Line 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, 10 Vrms
EN 61000-4-8 .................. Magnetic field immunity, 30A/m
EN 61000-4-11 .......... Voltage dips, 30% reduction for 500ms,
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100% reduction for 10 ms
Safety Standards ............. UL/IEC/EN 60601-1 (3.1 Edition),
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ANSI/AAMI ES 60601-1:2012,
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CSA C22.2 No. 60601-1:2014,
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IEC 62368-1:2014
Agency Approvals ............ UL, cUL, TUV, CE, CB, PSE, CCC
Other Compliance ............ RoHS, DOE & Energy Star Level VI,
...............................................
...............................................
ErP Stage 2

MODELS LIST
Notes:
1. AC inlet code “x”: “4” for C14 inlet, “6” for C6 inlet, “8” for C8 inlet, “F” for C18 inlet, e.g. TDM90-12-4, TDM90-15-6, TDM90-19-8, TDM90-24-F, etc.
2. TDM90-19.5-x-DL, -DLS & -DLSL are suitable for charging Dell laptops.
TDM90-19.5-x-HP, -HPS & -HPSL are suitable for charging HP laptops.
Refer to the mechanical specs for more information.

<table>
<thead>
<tr>
<th>Product No. (1)</th>
<th>Output Voltage</th>
<th>Maximum Current</th>
<th>Maximum Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDM90-12-x</td>
<td>12V</td>
<td>7A</td>
<td>84W</td>
</tr>
<tr>
<td>TDM90-15-x</td>
<td>15V</td>
<td>6A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-19-x</td>
<td>19V</td>
<td>4.7A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-19.5-x-DL</td>
<td>19.5V</td>
<td>4.62A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-19.5-x-DLS</td>
<td>19.5V</td>
<td>4.62A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-19.5-x-HP</td>
<td>19.5V</td>
<td>4.62A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-19.5-x-HPS</td>
<td>19.5V</td>
<td>4.62A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-24-x</td>
<td>24V</td>
<td>3.75A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-36-x</td>
<td>36V</td>
<td>2.5A</td>
<td>90W</td>
</tr>
<tr>
<td>TDM90-48-x</td>
<td>48V</td>
<td>1.88A</td>
<td>90W</td>
</tr>
</tbody>
</table>

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MECHANICAL SPECIFICATIONS

Notes:
1. Unit: mm
2. Weight: 580g (1.28 lbs) approx.
3. Standard output connector: 2.1 x 5.5 x 9.5mm barrel plug
4. Output connector on TDM90-19.5-x-DL for Dell laptops: 7.4 x 5.1 x 12.5mm barrel with 0.6mm smart pin
5. Output connector on TDM90-19.5-x-DLS for Dell laptops: 4.5 x 3.0 x 9.2mm barrel with 0.6mm smart pin
6. Output connector on TDM90-19.5-x-DLSL for HP laptops: Right angle 4.5 x 3.0 x 12mm barrel with 0.6mm smart pin
7. Output connector on TDM90-19.5-x-HP for HP laptops: 7.4 x 5.1 x 12.5mm barrel with 0.6mm smart pin
8. Output connector on TDM90-19.5-x-HPS for HP laptops: 4.5 x 3.0 x 9.2mm barrel with 0.6mm smart pin
9. Output connector on TDM90-19.5-x-HPSL for HP laptops: Right angle 4.5 x 3.0 x 12mm barrel with 0.6mm smart pin