



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
- Meets IEC 60601-1-2:2014 (4th Edition) Medical EMC
- 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
	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

Product No. ⁽¹⁾	Output Voltage	Maximum Current	Maximum Power
TDM90-12-x	12V	7A	84W
TDM90-15-x	15V	6A	90W
TDM90-19-x	19V	4.74A	90W
TDM90-19.5-x-DL ⁽²⁾	19.5V	4.62A	90W
TDM90-19.5-x-DLS ⁽²⁾	19.5V	4.62A	90W
TDM90-19.5-x-HP ⁽²⁾	19.5V	4.62A	90W
TDM90-19.5-x-HPS ⁽²⁾	19.5V	4.62A	90W
TDM90-24-x	24V	3.75A	90W
TDM90-36-x	36V	2.5A	90W
TDM90-48-x	48V	1.88A	90W

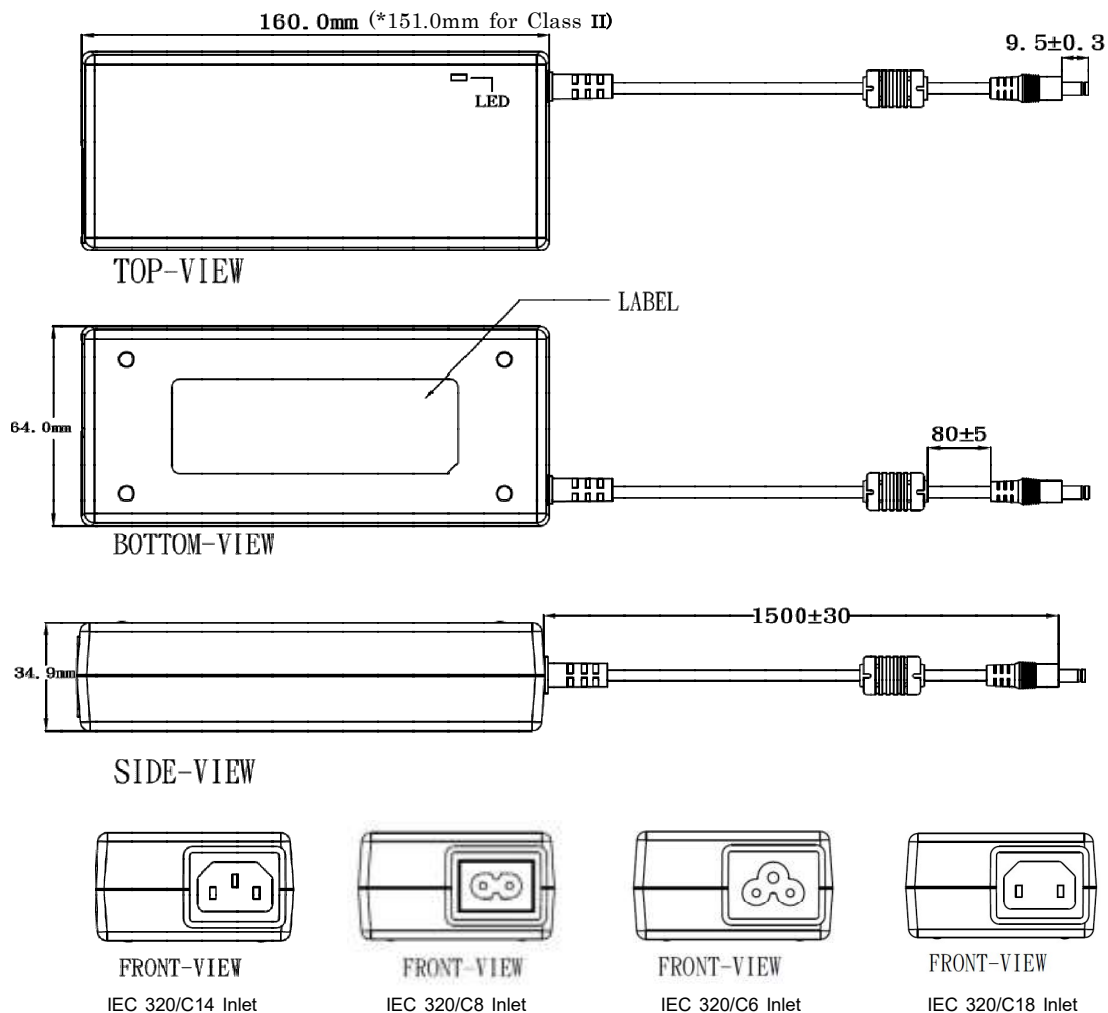
Notes:

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.

STANDARDS & COMPLIANCE

IEC/EN 60601-1-2 4 th 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, 100% reduction for 10 ms
Safety Standards	UL/IEC/EN 60601-1 (3.1 Edition), ANSI/AAMI ES 60601-1:2012, CSA C22.2 No. 60601-1:2014, IEC 62368-1:2014
Agency Approvals	UL, cUL, TUV, CE, CB, PSE, CCC
Other Compliance	RoHS, DOE & Energy Star Level VI, ErP Stage 2

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