



FEATURES

- IEC 320/C14 AC Inlet
- Dual & Triple Outputs
- Operating Altitude Up to 5,000 Meters
- No Load Power Consumption < 0.3W
- DOE Level VI and EU ErP Tier 2 Efficiency Compliant
- IEC/EN/UL 62368-1 Approvals

INPUT SPECIFICATIONS

Input Voltage Range	90-264 VAC
Input Frequency	47-63 Hz
Input Current	3A rms @ 115 VAC, 1.5A rms @ 230 VAC
Inrush Current.....	25A max. @ 115 VAC or 50A max. @ 230 VAC, at 25°C cold start
Touch Current	100 µA max. @ 240 VAC, 60 Hz
Earth Leakage Current	250 µA max. @ 240 VAC, 60 Hz
No Load Power Consumption...	0.3W max.

OUTPUT SPECIFICATIONS

Output Power Ratings	See models list
Output Regulation	See models list
Ripple & Noise	See models list
Overvoltage Protection	Set at 112-132% of its nominal output voltage; Latch off
Overload Protection	Shut down; Auto-recovery
Short Circuit Protection	Shut down; Auto-recovery
Over Temp. Protection	Shut down; Auto-recovery
Temperature Coefficient.....	±0.04%/°C max.
Transient Response	4 ms @ 115 VAC, full load
Hold-Up Time	16 ms min. @ 115 VAC, full load

GENERAL SPECIFICATIONS

Power Factor	> 0.95 @ 115 VAC, > 0.9 @ 230 VAC; full load
Efficiency.....	86% min. average
Hold-up Time	16 ms @ 100 VAC
Switching Frequency	70-90 KHz, full load
Line Regulation	±1% max. at full load
Operating Temperature	-20°C to +60°C
Output Power Derating	See derating chart
Storage Temperature	-40°C to +85°C
Relative Humidity	0-95%, non-condensing
Withstand Voltage	3,000 VAC, input-output, 1,500 VAC, input-ground 1,500 VAC, output-ground
Operating Altitude	5,000 meters max.
MTBF	300K hours minimum at full load, 25°C ambient, calculated per Bellcore TR-332



MODELS LIST

Product No.	Output Voltage	Output Current		Max. Output Power	*Ripple & Noise (Vp-p)	Total Regulation
		Min.	Max.			
TMA180-D21	+12V	0A	15A	180W	120mV	±5%
	+5V	0A	14A		100mV	
TMA180-D22	+12V	0A	15A	180W	120mV	±5%
	-12V	0A	1A		100mV	
TMA180-T31	+12V	0A	15A	180W	120mV	±5%
	+5V	0A	14A		100mV	
	-12V	0A	1A		120mV	

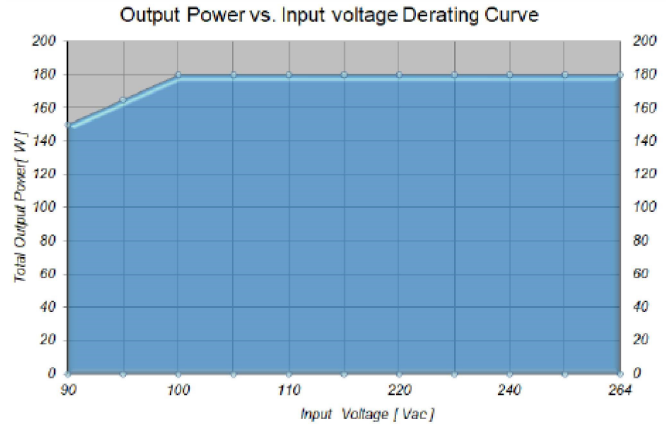
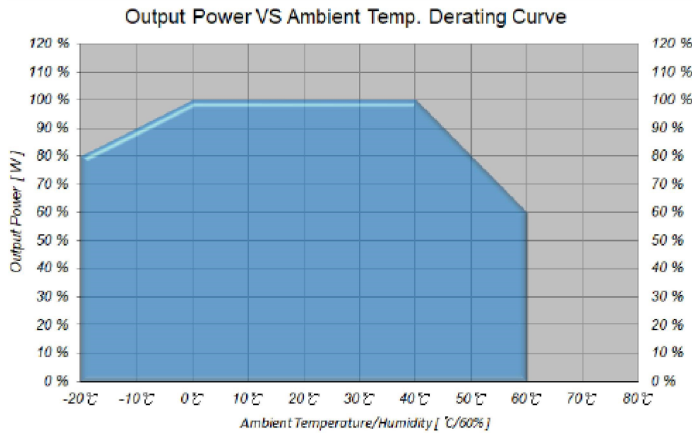
* Ripple & Noise are measured with 20MHz bandwidth at nominal line and rated output load ranges, with a 47µF electrolytic capacitor and a 0.1 µF ceramic capacitor in parallel at output connector.

STANDARDS & COMPLIANCE

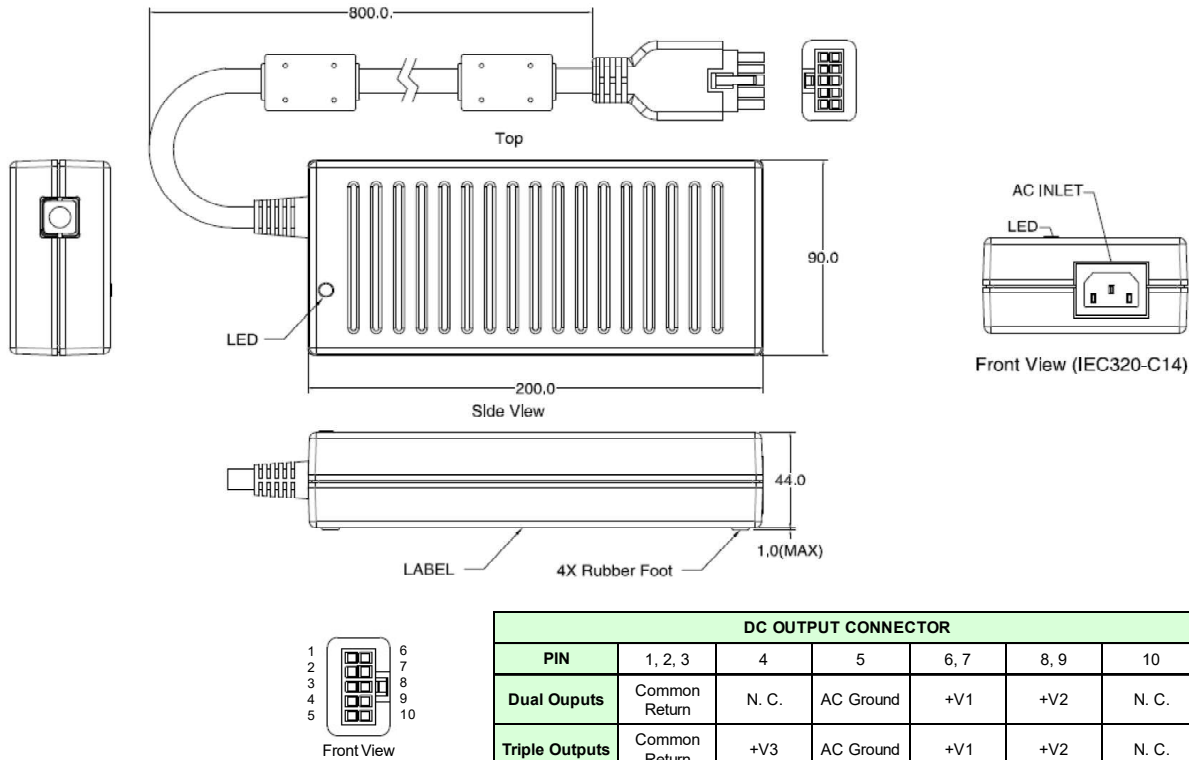
EN 55032 & 55035	Class B, conducted & radiated
FCC	Class B, conducted & radiated
EN 61000-3-2	Harmonic distortion, Class A & D
EN 61000-3-3	Line flicker
EN 61000-4-2	ESD, ±15 KV air and ±8 KV contact
EN 61000-4-3	Radiated immunity, 10V/m
EN 61000-4-4	Fast transient/burst, ±2 KV
EN 61000-4-5	Surge, ±1 KV diff., ±2 KV com.
EN 61000-4-6	Conducted immunity, 10 Vrms
EN 61000-4-8	Magnetic field immunity, 30 A/m
EN 61000-4-11	Voltage dips, 30% reduction for 500 ms, 60% reduction for 100 ms, >95% reduction for 20 ms
Safety Standards	IEC/EN/UL/CSA 62368-1 (2nd Ed.) *IEC/EN/UL 60601-1 (Ed. 3.1)
Agency Approvals.....	UL, cUL, TUV, CE, CB
Other Compliance	RoHS, DoE/CEC Level VI, EU ErP Tier 2

*It meets IEC/EN/UL 60601-1 (Edition 3.1) and 60601-1-2 (4th Edition) medical standards, but series does not currently have medical safety certifications.

OUTPUT POWER DERATING CHARTS



MECHANICAL SPECIFICATIONS



- Notes:
- Unit: mm
 - Tolerance: ±1mm unless specified
 - Weight: 1,000 grams approx.
 - Output Connector: 10-pin 4.2mm pitch male plug or equivalent
 - Mating Connector: Molex P/N 39-28-123 or equivalent
 - Contact TRUMPower for other output connector options.