



- ✓ Safety: Medical IEC60601 3rd Ed, Amend 1
- ✓ BF Leakage, 2 MOPP
- ✓ Active Power Factor Correction
- ✓ Universal 90 to 260 VAC Input, 50/60 Hz
- ✓ DoE Level VI Efficiency
- ✓ Single Outputs from 12 to 48VDC
- ✓ Over Voltage and Overload Protection
- ✓ IEC-C14 Inlet, Class I



PRODUCT DESCRIPTION

The Astrodyne TDI AMP2511 is a series of external desktop power supplies designed for industrial and low leakage medical applications. These products operate over the input voltage range of 90 to 264 VAC at 50/60Hz and deliver up to 250 Watts of regulated DC output power. Incorporating active power factor correction, they operate at efficiency levels up to 91%. They are compliant with the latest Level VI efficiency requirements, and medical safety certifications for IEC 60601 3rd Edition Amendment 1.

PRODUCT MODELS

Model	Output Power	Output Voltage	Output Current	Load Regulation	Efficiency
AMP2511-05	230W	12VDC	19.16A	±5%	90%
AMP2511-07	250W	19VDC	13.15A	±5%	91%
AMP2511-08	250W	24VDC	10.41A	±3%	91%
AMP2511-09	250W	30VDC	8.32A	±3%	91%
AMP2511-10	250W	36VDC	6.94A	±3%	91%
AMP2511-11	250W	48VDC	5.20A	±3%	91%

250 Watt Medical Grade Desktop Adapter

AMP2511

INPUT SPECIFICATIONS

Input Voltage Range	100-240 VAC rated 90-264 VAC tested
Input Frequency	47-63 Hz (50/60 Hz nom.)
Input Current	2.8A typ at 100VAC 1.4A typ at 240VAC
Inrush Current	60A max low line 150A max high line
Power Correction Factor	0.95 min
Earth Leakage Current	0.25mA max at 240VAC

MAIN OUTPUT SPECIFICATIONS

Output Voltage	See Selection Chart
Output Power	See Selection Chart
No Load Power	210mW max
Efficiency	91% typ 230VAC, Full Load
Load Regulation	See Selection Chart
Line Regulation	±1% max 110-120,200-240VAC
Over Voltage Protection *	120-180%, Latching
Over Load Protection *	110-150%, Auto Recovery
Transient Response	4ms 110Vin, FL to ½ Load
Hold-Up Time	16ms
Start-Up Time	2s max Full Load
Temperature Coeff.	±0.04%/°C
Ripple/Noise	1% Pk-Pk max

ISOLATION SPECIFICATIONS

Input to Output (P-S)	4000 VAC
Input to GND (P-G)	1500 VAC
Isolation Resistance	50MΩ min P-S, 500VDC

MECHANICAL SPECIFICATIONS

Size (case only)	7.87" x 2.56" x 1.77" 200 x 85 x 45 mm
Weight	27oz / 765g
Case Type	Desktop

All specifications are typical at nominal input, full load, 25°C unless specified otherwise.

*These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Operation under conditions other than the standard operating conditions is neither warranted nor implied.

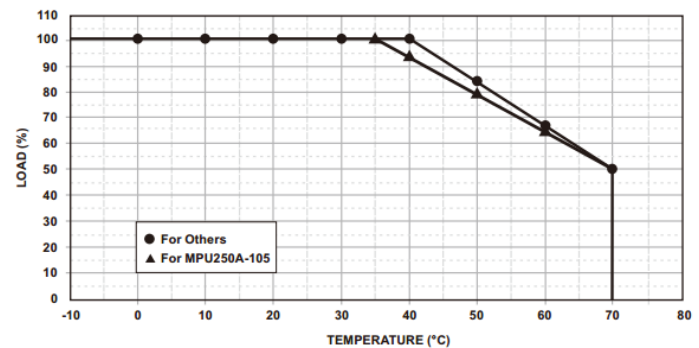
SAFETY AND COMPLIANCE CERTIFICATIONS

Safety Approvals	IEC60601-1 Ed 3.1, CSA C22.2, ES60601 -1:2005(R2012), EN60601-1:2006/A1:2013
Conducted and Radiated Emissions	EN55011 (CISPR11), EN60601-1-2, FCC Part 18: Class B
Surge Voltage	1kV L-N, 2kV L-PE and N-PE **
ESD IEC61000-4-2	15kV Air, 8kV Contact
Flammability Rating	UL 94 V-1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-10 to +30°C at Full Load, up to +70°C at Reduced Load See derating charts
Cooling	Free Air Convection
Storage Temp*	-40 to +85°C
Humidity*	0% to 95%, non-condensing
Operating Altitude	3000m
Vibration *	5G, 10 ~500Hz, 10min/cycle, 60min ea. along x, y, z axes
MTBF	200k hrs MIL-HDBK-217F, 25°C

TEMPERATURE DERATING – 100-240 VAC



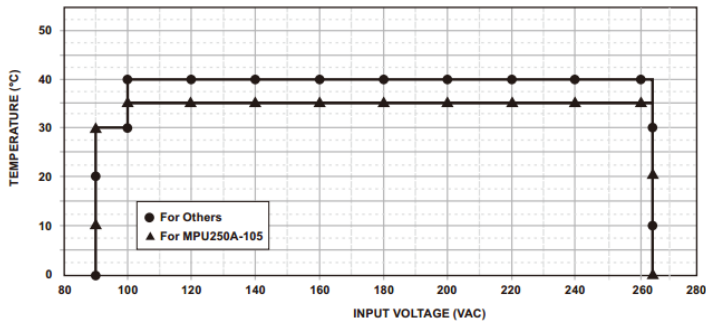
Other Specification Notes:

1. Output can provide up to peak load at startup.
2. Output voltage set at 60% load.
3. Line regulation defined using a ±10% change in input voltage from the nominal line at full rated load.
4. Load regulation defined using a ±40% change in output load from a load that is 60% of the rated.
5. Ripple bandwidth is 20MHz bandwidth, loaded with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor.
6. Hold-up time measured from last charge pulse until output drops to low limit using nominal line input.
7. Efficiency measured at rated load using nominal input.

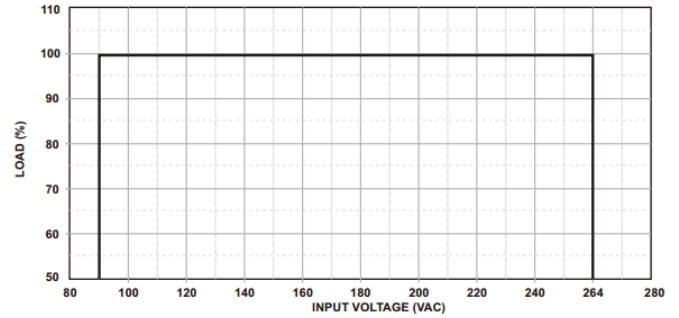
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TEMPERATURE DERATING vs. INPUT VOLTAGE



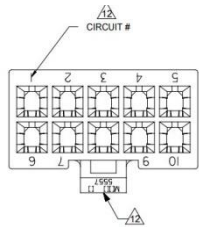
LOAD DERATING vs. INPUT VOLTAGE



MECHANICAL SPECIFICATIONS - Dimensions in mm [inches]

DC Output Connector

Molex 39-01-2100



P1	
PINS: 6-9	V+
PINS: 1-4	RTN
PIN: 10	N/C
PIN: 5	GND

mate:
Molex 39-01-2101
or similar

Case

