

150 Watt Medical



Features

- 4 x 2 x 1.3 inches form factor
- 150 W with forced-air cooling
- Class 1 & Class 2 options
- 12 V @ 0.5 A fan voltage auxiliary output
- High Efficiency > 86%
- Low conducted and radiated noise
- Light weight
- Medical approvals

Electrical Specifications

Input Voltage	90–264 VAC/120–390 VDC, Universal	
Input Frequency	47–63 Hz	
Input Current	120 VAC: 1.7 A max.	230 VAC: 0.85 A max.
No Load Power	1.2 W	
Inrush Current	120 VAC: 35 A max.	230VAC: 65 A max.
Leakage Current	120 VAC: < 140 μ A	230 VAC: < 250 μ A
Efficiency	120 VAC: 84% typical	230 VAC: 86% typical
Hold-up Time	120 VAC: 6 ms	230 VAC: 10 ms
Power Factor	120 VAC: 0.99	230 VAC: 0.95
Output Power	150 W	
Peak Power	170 W for 0.2 s	
Line Regulation	+/-0.5%	
Load Regulation	+/-2.0%	
Transient Response	< 10%, 50% to 100% load change, 50 Hz, 50% duty cycle, 0.1 A/ μ s, recovery time < 5 ms	
Rise Time	< 100 ms	
Set Point Accuracy (Main Output)	+/-1%	
Output Adjustability	+/-3.0 %	
Over Current Protection	110% typical above rating	
Over Voltage Protection	110 to 150%	
Short Circuit Protection	Short term, autorecovery	
Switching Frequency	PFC converter: Variable, 35–250 kHz; 90 kHz typical Resonant converter: Variable, 35–250 kHz; 90 kHz typical	
Operating Temperature	–20 to +70°C, refer derating curve, –20 to 0°C, start-up is guaranteed	
Storage Temperature	–40 to +70°C	
Relative Humidity	95% Rh, noncondensing	
Altitude	Operating: 10,000 ft.; Nonoperating: 40,000 ft.	
MTBF	2.4m Hours, Telcordia -SR332-issue 3	
Isolation Voltage	Min. 5900 VDC between input to output	
Cooling	Convection: 80 W; 300 LFM: 100 W (5 V model) Convection: 100 W; 300 LFM: 150 W (other model)	

Model Number	Description	Voltage	Max. Load ¹ (Convection)	Max. Load ¹ (300 LFM)	Min. Load	Ripple ²
LFMWLT150-1000	Class 1 with Screw Terminal	5 V	16.0 A	20.0 A	0.0 A	1%
LFMWLT150-1000-2	Class 2 with Screw Terminal					
LFMWLT150-1300	Class 1 with JST Connector	5 V	16.0 A	16.0 A	0.0 A	1%
LFMWLT150-1300-2	Class 2 with JST Connector					
LFMWLT150-1001	Class 1 with Screw Terminal	12 V	8.33 A	12.5 A	0.0 A	1%
LFMWLT150-1001-2	Class 2 with Screw Terminal					
LFMWLT150-1301	Class 1 with JST Connector	12 V	8.33 A	12.5 A	0.0 A	1%
LFMWLT150-1301-2	Class 2 with JST Connector					
LFMWLT150-1002	Class 1 with Screw Terminal	15 V	6.67 A	10.0 A	0.0 A	1%
LFMWLT150-1002-2	Class 2 with Screw Terminal					
LFMWLT150-1302	Class 1 with JST Connector	15 V	6.67 A	10.0 A	0.0 A	1%
LFMWLT150-1302-2	Class 2 with JST Connector					
LFMWLT150-1003	Class 1 with Screw Terminal	24 V	4.17 A	6.25 A	0.0 A	1%
LFMWLT150-1003-2	Class 2 with Screw Terminal					
LFMWLT150-1303	Class 1 with JST Connector	24 V	4.17 A	6.25 A	0.0 A	1%
LFMWLT150-1303-2	Class 2 with JST Connector					
LFMWLT150-1004	Class 1 with Screw Terminal	48 V	2.08 A	3.13 A	0.0 A	1%
LFMWLT150-1004-2	Class 2 with Screw Terminal					
LFMWLT150-1304	Class 1 with JST Connector	48 V	2.08 A	3.13 A	0.0 A	1%
LFMWLT150-1304-2	Class 2 with JST Connector					
LFWLT100-CK metal cover kit accessory						

Notes

1. Combined output power from V1 and VFAN should not exceed the total output power rating.
2. Ripple is 2% up to 20% load and < 1% above 20% load. Ripple is peak to peak with 20 MHz bandwidth and 10 μ F (Tantalum capacitor) in parallel with a 0.1 μ F capacitor at rated line voltage and load ranges.
3. Fan output voltage tolerance is +/-20%.
4. Peak current for fan output is 1 A.
5. Class 1 products have an Earthing tab and Class 2 products (-2 suffix) have no Earthing tab.
6. Specifications are for nominal input voltage, 25°C and max. load unless otherwise stated.
7. Derate output power linearly to 80% from 90 VAC to 80 VAC input.



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Connectors

J1	Pin 1	AC LINE
	Pin 2	AC NEUTRAL
Spade Connector (Class 1 product only)		EARTH
J2	Pin 1, 2	V1
	Pin 3, 4	RTN
J3	Pin 1	VFAN (12 V/0.5 A)
	Pin 2	RTN

Mechanical Specifications

AC Input Connector (J1)	Molex: 26-60-4030 or equivalent Mating: 09-50-3031; Pins: 08-50-0106
EARTH	Molex: 19705-4301 or equivalent Mating: 190030001
DC Output Connector (J2)	Option 1: Tyco: 1776112-4 or equivalent Mating: 13 AWG wire Option 2: JST: B4P-VH-B (LF) (SN) or B4P-VH (LF) (SN) or equivalent Mating: VHR-4M; Pins: SVH-41T-P1.1
Fan Connector (J3)	Tyco: 640456-2 or equivalent Mating: 640440-2
Dimensions	4.0 x 2.0 x 1.324 inches (101.6 x 50.8 x 33.63 mm)
Weight	150 g

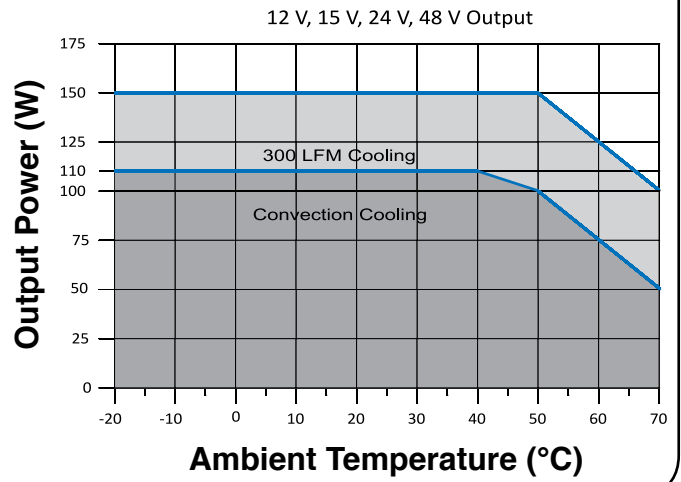
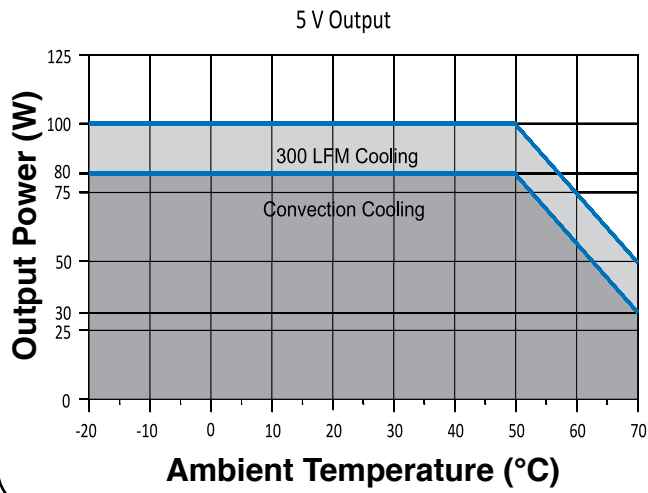
EMC

CE Mark	Complies with LVD Directive
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15 Class B, EN50082-1
Static Discharge	EN61000-4-2, Level-3
RF Field Susceptibility	EN61000-4-3, Level-3
Fast Transients/Bursts	EN61000-4-4, Level-3
Radiated Emissions	EN55022-B, CISPR22-B, FCC PART15-B To be controlled in end system
Surge Susceptibility	EN61000-4-5, Level-3
Harmonic Current	EN61000-3-2, Class D

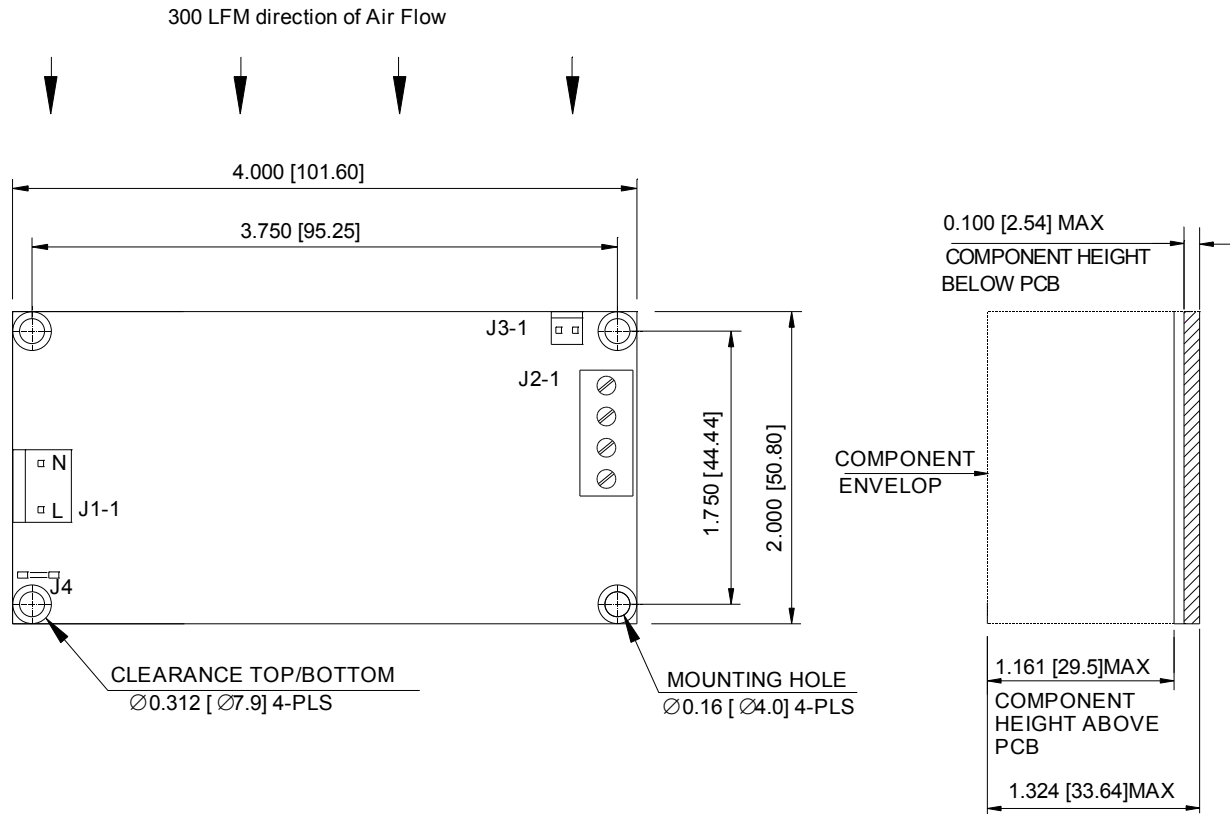
Safety

Safety Standard(s)	EN60601-1, IEC60601-1 (ed.3), ANSI / AAMI ES 60601 - 1, CSA C22.2 No. 60601-1
Approval Agency	Nemko, UL, C-UL
Safety File Number(s)	Nemko: P12215339 UL: E173812

Derating Curve



Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN INCHES [MM]
GEN. TOLERANCE: +/-0.02 [+/-0.5]



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