

200 Watt Medical



Features

- 5.0 x 3.0 x 1.5 inches form factor
- 200 W with forced air cooling
- High efficiency > 88%
- 12 V fan output
- 5 V standby output
- Remote sense
- Output voltage adjustability

Electrical Specifications

| | | |
|--------------------------|---|------------------------|
| Input Voltage | 90–264 VAC/120–390 VDC, Universal | |
| Input Frequency | 47–63 Hz | |
| Input Current | 120 VAC: 2.4 A max. | 230 VAC: 1.2 A max. |
| Inrush Current | 120 VAC: 35 A max. | 230 VAC: 65 A max. |
| Leakage Current | 120 VAC: < 150 μ A | 230 VAC: < 300 μ A |
| Efficiency | 120 VAC: 84% typical | 230 VAC: 86% typical |
| Hold-up Time | 120 VAC: 10 ms | 230 VAC: 10 ms |
| Power Factor | 120 VAC: 0.99 | 230 VAC: 0.95 |
| Output Power | 160 to 200 W | |
| Peak Power | 250 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 Tolerance | +/-1% | |
| Output Adjustability | +/-3.0% | |
| Over Current Protection | 110% typical above rating | |
| Over Voltage Protection | 110 to 150% | |
| Short Circuit Protection | Short term, auto recovery | |
| 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, non condensing | |
| Altitude | Operating: 10,000 ft.; Non-operating: 40,000 ft. | |
| MTBF | > 200 kh, Bellcore TR332 | |
| Isolation Voltage | Min. 5900 VDC between input to output | |
| Cooling | Convection: 130 W; 300 LFM: 175 W (5 V model) Convection: 160 W; 300 LFM: 200 W (Other model) | |

| Model Number | Description | Voltage | Max. Load ¹ (Convection) | Max. Load ¹ (300 LFM) | Min. Load | Ripple ² |
|---------------------------------------|-----------------------------|---------|--|-------------------------------------|-----------|---------------------|
| LFMWLT200-1000 | Class 1 with Screw Terminal | 5 V | 26.0 A | 35.0 A | 0.0 A | 1% |
| LFMWLT200-1000-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1300 | Class 1 with JST Connector | 5 V | 26.0 A | 26.0 A | 0.0 A | 1% |
| LFMWLT200-1300-2 | Class 2 with JST Connector | | | | | |
| LFMWLT200-1001 | Class 1 with Screw Terminal | 12 V | 13.33 A | 16.67 A | 0.0 A | 1% |
| LFMWLT200-1001-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1301 | Class 1 with JST Connector | 12 V | 13.33 A | 16.67 A | 0.0 A | 1% |
| LFMWLT200-1301-2 | Class 2 with JST Connector | | | | | |
| LFMWLT200-1002 | Class 1 with Screw Terminal | 15 V | 10.66 A | 13.33 A | 0.0 A | 1% |
| LFMWLT200-1002-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1302 | Class 1 with JST Connector | 15 V | 10.66 A | 13.33 A | 0.0 A | 1% |
| LFMWLT200-1302-2 | Class 2 with JST Connector | | | | | |
| LFMWLT200-1003 | Class 1 with Screw Terminal | 24 V | 6.66 A | 8.33 A | 0.0 A | 1% |
| LFMWLT200-1003-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1303 | Class 1 with ST Connector | 24 V | 6.66 A | 8.33 A | 0.0 A | 1% |
| LFMWLT200-1303-2 | Class 2 with JST Connector | | | | | |
| LFMWLT200-1004 | Class 1 with Screw Terminal | 48 V | 3.33 A | 4.17 A | 0.0 A | 1% |
| LFMWLT200-1004-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1304 | Class 1 with JST Connector | 48 V | 3.33 A | 4.17 A | 0.0 A | 1% |
| LFMWLT200-1304-2 | Class 2 with JST Connector | | | | | |
| LFMWLT200-1005 | Class 1 with Screw Terminal | 30 V | 5.33 A | 6.67 A | 0.0 A | 1% |
| LFMWLT200-1005-2 | Class 2 with Screw Terminal | | | | | |
| LFMWLT200-1305 | Class 1 with JST Connector | 30 V | 5.33 A | 6.67 A | 0.0 A | 1% |
| LFMWLT200-1305-2 | Class 2 with JST Connector | | | | | |
| LFWLT200-CK metal cover kit accessory | | | | | | |

Notes

1. Combined output power from V1, VSTBY 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%. During V1 full load, VFAN needs min. 20 mA load to be within regulation band.
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. PSU is supplied with J3 housing, pin-4 and pin-6 shorted to enable main output without remote on-off feature.
8. Derate output power linearly to 80% from 90 VAC to 80 VAC input.

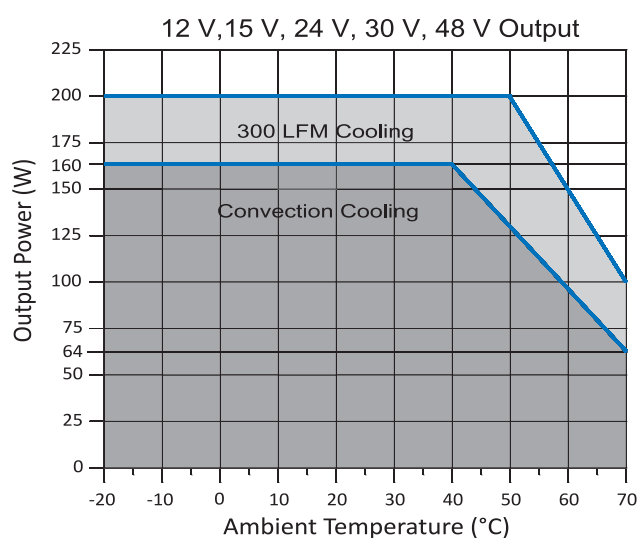
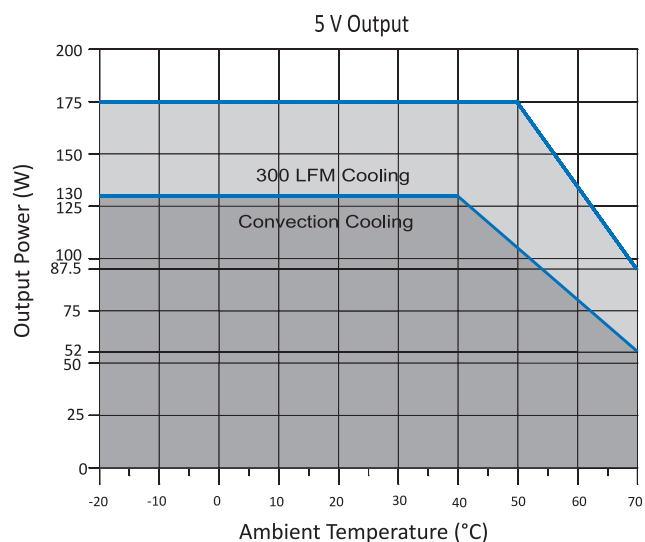


| Connectors | | |
|--|-------------|------------|
| J1 | Pin 1 | AC NEUTRAL |
| | Pin 2 | AC LINE |
| Spade Connector (J4) (Class 1 product only) | | EARTH |
| J2 | Pin 1, 2, 3 | RTN |
| | Pin 4, 5, 6 | V1 |

| Connectors | | |
|------------|-------|------------------------|
| J3 | Pin 1 | +VE REMOTE SENSE |
| | Pin 2 | VFAN (12 V/0.5 A) |
| | Pin 3 | -VE REMOTE SENSE |
| | Pin 4 | REMOTE ON/OFF |
| | Pin 5 | VSTBY (5 V/1 A, +/-5%) |
| | Pin 6 | RTN |
| | Pin 7 | POWER FAIL |
| | Pin 8 | POWER GOOD |

| Mechanical Specifications | |
|---------------------------|---|
| AC Input Connector (J1) | Molex: 26-60-4030 or equivalent Mating: 09-50-3031; Pins: 08-50-0106 |
| EARTH (J4) | Molex: 19705-4301 or equivalent Mating: 190030001 |
| DC Output Connector (J2) | Option 1: Tyco: 2-1776112-3 or equivalent Mating: 13 AWG wire Option 2: JST: B6P-VH-B (LF) (SN) or B6P-VH (LF) (SN) or equivalent Mating: VHR-6M; Pins: SVH-41T-P1.1 |
| Signal Connector (J3) | Molex: 22-23-2081 or equivalent Mating: 22-01-2087, Pins: 08-50-0113 |
| Dimensions | 5.0 x 3.0 x 1.5 inches (127 x 76.2 x 38.1 mm) |
| Weight | 325 g |
| EMC | |
| CE Mark | Complies with LVD Directive |
| Conducted Emissions | EN55022-B, CISPR22-B, FCC PART15 CLASS-B, EN60601-1-2 |
| 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), UL60601-1 (1st Edition), CSA C22.2 No. 601.1 |
| Approval Agency | Nemko, UL, C-UL |
| Safety File Number(s) | Nemko: P11213837/38; UL: E173812 |

Derating Curve



Mechanical Drawing

