POWER

LCM1500

1500 Watt Bulk Front End

Data Sheet

Total Power: 1500 W
# of Outputs: Single
Outputs: 12 V to 48 V
Optional 5.0 V standby

80 PLUS SILVER INDUSTRIAL

SPECIAL FEATURES

- 1500 W output power
- Low cost
- 2.5” x 5.2” x 10.0”
- 12 Watts per cubic inch
- Industrial/Medical safety
- -40 °C to 70 °C with derating
- Optional 5 V @ 2 A housekeeping
- High efficiency: 89% typical
- Variable speed “Smart Fans”
- DSP controlled
- Conformal coat option
- ± 10% adjustment range
- Margin programming
- OR-ing FET
- 80 PLUS® certified (Q model)

COMPLIANCE

- EMI Class A
- EN61000 Immunity
- RoHS 2

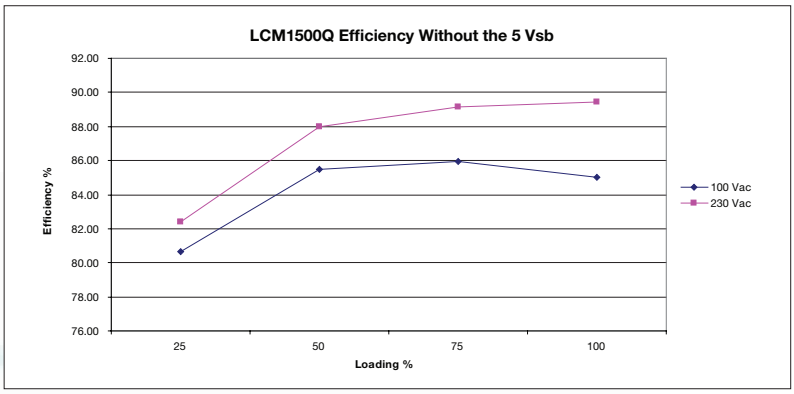
SAFETY

- ULcUL Recognized ITE (UL60950-1)
- ULcUL Recognized Medical (ANSI/AAMI ES60601-1)
- TUV-SuD ITE + Medical (EN60950-1 and EN60601-1)
- CE LVD (EN60950-1 + RoHS)
- BSMI
- CB Report
  - through Demko for IEC60950-1
  - through TUV-SuD for IEC60601-1

** LCM1500 tested according to the medical standard IEC 60601-1-2 4th Edition.

Electrical Specifications

Input	
Input range	90 - 264 Vac (Operating) 115/230 Vac (Nominal) TERMINAL BLOCK
Frequency	47 - 440 Hz, Nominal 50/60
Input fusing	Internal 30 A fuses, both lines fused
Inrush current	≤ 25 A peak, either hot or cold start
Power factor	0.99 typical, meets EN61000-3-2
Harmonics	Meets IEC 1000-3-2 requirements
Input current	18 A RMS max input current, at 100 Vac
Hold up time	14 ms minimum for main O/P, at full rated load
Efficiency	> 91% typical at full load / 230 Vac nominal (48V version)
Leakage current	< 300 µA @ 240 Vac
ON/OFF power switch	N/A
Power line transient	MOV directly after the fuse
Isolation	PRI-Chassis 2500 Vdc Basic PRI-SEC 4000 VAC Reinforced 2xMOPP SEC-Chassis 500 Vdc



ARTESYN™
An Advanced Energy Company

Electrical Specifications

Output		
Output rating	See table 1	90 - 264 Vac
Set point	± 0.5%	90 - 264 Vac
Total regulation range	Main output ± 2% 5 Vsb	Combined line/load/transient when measured at output terminal
Rated load	1500 W maximum	Derate linear to 50% from 50 °C to 70 °C
Minimum load	Main output @ 0.0 A 5 Vsb @ 0.0 A	No loss of regulation
Output noise (PARD)	1% max p-p 50 mV max p-p	Main output 5 Vsb output Measured with a 0.1 µF Ceramic and 10 µF Tantalum Capacitor on any output, 20 MHz
Output voltage overshoot		No overshoot/undershoot outside the regulation band during on or off cycle
Transient response	< 300 µSec	50% load step @ 1 A/µs Step load valid between 10% to 100% of output rating Recovery time to within 1% of set point at onset of transient
Max units in parallel		Up to 4
Short circuit protection	Protected, no damage to occur	Bounce mode
Remote sense		Compensation up to 500 mV
Output isolation		Standard per safety requirements
Forced load sharing	To within 10% of all shared outputs	Analog sharing control
Overload protection (OCP)	105% to 125% 120% to 170%	Main output 5 Vsb output
Overvoltage protection (OVP)	125% to 145% 110% to 125%	12 V output 5 Vsb output
Overtemp protection	10 - 15 °C above safe operating area	Both PFC and output converter monitored

Environmental Specifications

Operating temperature	-40 °C to +70 °C, linear derating to 50% from 50 °C to 70 °C
Storage temperature	-40 °C to +85 °C
Humidity	10 to 90%, non-condensing. Operating. Conformal coat option available.
Fan noise	< 45 dBA, 80% load at 30
Altitude	Operating - 16,405 feet (5,000 m) Storage - 30,000 feet
Shock	MIL-STD-810F 516.5, Procedure I, VI. Storage
Vibration	MIL-STD-810F 514.5, Cat. 4, 10. Storage