



## Features

- 110 W fan cooled rating
- Small 5.0 x 3.04 x 1.07 inches form factor
- High efficiency > 82%
- Low conducted and radiated noise
- EN61000-3-2 class A harmonics
- Cover kit accessory available

## Electrical Specifications

AC Input	90-264 V, 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: < 500 $\mu$ A	230 VAC: < 1000 $\mu$ A
Efficiency	120 VAC: 80% typical	230 VAC: 82% typical
Hold-up Time	120 VAC: 15 ms	230 VAC: 22 ms
Output Power	80 to 110 W	
Line Regulation	+/-0.3%	
Load Regulation	V1: +/-1%, V2: +/-5%, V3 & V4: +/-7%	
Transient Response	< 10%, 50% to 100% load change, 50/60 Hz, 50% duty cycle, 0.1 A/ $\mu$ s, recovery time < 5 ms	
Rise Time	< 40 ms	
Set Point Tolerance	V1: +/-3%, V2: +/-5%, V3 & V4: +/-7%	
Over Current Protection	110 to 160%	
Over Voltage Protection	6.2 V +/-0.4 V for V1 with 5 V; 4.1 V +/-0.2 V for V1 with 3.3 V	
Short Circuit Protection	Short term with auto recovery < 6 s	
Switching Frequency	Boost converter: 45 kHz typical Resonant converter: 45 kHz typical	
Operating Temperature	0 to 70°C, refer derating curve	
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, MIL-HDBK-217F	
Isolation Voltage	Min. 4242 VDC between input and output	
Cooling	Convection: 80 W; 150 LFM: 110 W	

Model Number	Voltage	Max. Load <sup>1</sup> (Convection)	Max. Load <sup>1</sup> (150 LFM)	Min. Load	Ripple <sup>2</sup>
LFVLT110-1300	V1=5.1 V	12.0 A	18.0 A	0.1 A	1%
LFVLT110-1301	V1=12 V	6.8 A	9.2 A	0.4 A	1%
LFVLT110-1302	V1=15 V	5.5 A	7.3 A	0.4 A	1%
LFVLT110-1303	V1=24 V	3.33 A	4.6 A	0.1 A	1%
LFVLT110-1304	V1=48 V	1.7 A	2.3 A	0.2 A	1%
LFVLT110-4300	V1=5.1 V, V2=12.4 V, V3=-5.1 V, V4=-12.5 V	V1=10.0 A, V2=3.0 A, V3=0.8 A, V4=0.8 A	V1=15.0 A, V2=4.1 A, V3=1.1 A, V4=1.1 A	V1=1.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	1%
LFVLT110-4301	V1=5.1 V, V2=23.5 V, V3=12.5 V, V4=-12.5 V	V1=10.0 A, V2=2.0 A, V3=0.8 A, V4=0.8 A	V1=15.0 A, V2=2.75 A, V3=1.1 A, V4=1.1 A	V1=1.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	1%
LFVLT110-4302	V1=5.1 V, V2=16 V, V3=-5.1 V, V4=-16 V	V1=10.0 A, V2=3.0 A, V3=0.8 A, V4=0.8 A	V1=15.0 A, V2=4.1 A, V3=1.1 A, V4=1.1 A	V1=1.0 A, V2=0.1 A, V3=0.0A, V4=0.0 A	1%
LFVLT110-4303	V1=5.1 V, V2=12.4 V, V3=24 V, V4=-12.5 V	V1=10.0 A, V2=3.0 A, V3=0.8 A, V4=0.8 A	V1=15.0 A, V2=4.1 A, V3=1.1 A, V4=1.1 A	V1=1.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	1%
LFVLT110-4304	V1=3.3 V, V2=5.1 V, V3=12.5 V, V4=-12.5 V	V1=10.0 A, V2=3.0 A, V3=0.8 A, V4=0.8 A	V1=15.0 A, V2=4.1 A, V3=1.1 A, V4=1.1 A	V1=1.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	V1=1.5% V2, V3, V4=1%
LFVLT80-CK metal cover kit accessory					

Connectors		
J1	Pin 1	AC NEUTRAL
	Pin 2	AC LINE
Spade Connector		EARTH
J2	Pin 1, 2, 3, 4	V1
	Pin 5, 6, 7, 8	RTN
	Pin 9, 10	V2
	Pin 11	V3
J3	Pin 12	V4
	Pin 1	RTN
	Pin 2	POWER FAIL/GOOD

## Notes

1. Maximum current per output channel. Do not exceed total output power rating.
2. Ripple is peak to peak with 20 MHz bandwidth and 10  $\mu$ F (Tantalum capacitor) in parallel with a 0.1  $\mu$ F capacitor at rated line voltage and load ranges.
3. Power fail and power good signal on quad output models only.
4. Specifications are for nominal input voltage, 25°C and max. load unless otherwise stated.
5. Derate output power linearly to 80% from 90 VAC to 80 VAC input.

## Mechanical Specifications

AC Input Connector (J1)	Molex: 26-60-4030 or equivalent Mating: 09-50-3031; Pins: 08-50-0106
EARTH	Molex: 19705-4301 Mating: 190030001
DC Output Connector (J2)	Tyco: 1-640445-2 or equivalent Mating: 1-647402-2; Pins: 647485
Signal Connector (J3)	Molex: 22-23-2021 or equivalent Mating: 22-01-2021
Dimensions	5.0 x 3.04 x 1.07 inches (127.0 x 77.22 x 27.18 mm)
Weight	250 g
<b>EMC</b>	
CE Mark	Complies with LVD Directive
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15-B
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 A
<b>Safety</b>	
Safety Standard(s)	IEC60950-1 (ed.2), EN60950-1, UL60950-1 (2nd Edition), CSA C22.2 No. 60950-1 (2nd Edition), Class 1 SELV
Approval Agency	Nemko, UL, C-UL
Safety File Number(s)	Nemko: P09210934 UL: E150565
<b>Signal</b>	
Power Fail/Good Signal <sup>3</sup>	Signal goes high after a delay of 100 ms once main output is within regulation band. Signal goes low 1 ms advance before output goes out of regulation due to mains failure

