

# 100 Watt Industrial



## Features

- 100 W convection cooled rating
- Small 5.0 x 3.04 x 1.073 inches form factor
- 6.7 W/in<sup>3</sup> power density
- High efficiency > 85%
- Low conducted and radiated noise
- Power good and power fail signal
- Cover kit accessory available

## Electrical Specifications

AC Input	90–264 V, Universal	
Input Frequency	47–63 Hz	
Input Current	120 VAC: 2.0 A max.	230 VAC: 1.0 A max.
Inrush Current	120 VAC: 18 A max.	230 VAC: 35 A max.
Leakage Current	120 VAC: < 500 $\mu$ A	230 VAC: < 1000 $\mu$ A
Efficiency	120 VAC: 83% typical	230 VAC: 85% typical
Hold-up Time	120 VAC: 10 ms	230 VAC: 16 ms
Output Power	100 W	
Line Regulation	+/-0.3%	
Load Regulation <sup>1</sup>	V1: +/-1%; V2, V3 and V4: +/-5%	
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	< 50 ms	
Set Point Tolerance	V1: +/-2%; V2, V3, V4: +/-5%	
Over Current Protection	110 to 170%	
Over Voltage Protection	6.2 V +/-0.4 V for 5 V	
Short Circuit Protection	Short term, auto recovery	
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 +85°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 to output	
Cooling	Convection	

Model Number	Voltage	Max. Load <sup>2</sup>	Min. Load	Ripple <sup>3</sup>
LFVLT100-1001	V1=12 V	7.5 A	1.0 A	3%
LFVLT100-1002	V1=15 V	6.67 A	0.5 A	3%
LFVLT100-1003	V1=24 V	4.2 A	0.1 A	3%
LFVLT100-1004	V1=48 V	2.1 A	0.2 A	3%
LFVLT100-4000	V1=5.1 V, V2=12.25 V, V3=-5 V, V4=-12 V	V1=12.0 A, V2=4.0 A, V3=0.8 A, V4=0.8 A	V1=3.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	V1, V3=1% V2, V4=3%
LFVLT100-4001	V1=5.1 V, V2=24.5 V, V3=12 V, V4=-12 V	V1=12.0 A, V2=2.0 A, V3=0.8 A, V4=0.8 A	V1=3.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	V1=1% V2, V3, V4=3%
LFVLT100-4002	V1=5.1 V, V2=16 V, V3=-4.8 V, V4=-15.5 V	V1=12.0 A, V2=3.0 A, V3=0.8 A, V4=0.8 A	V1=3.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	V1, V3=1% V2, V4=3%
LFVLT100-4003	V1=5.1 V, V2=12 V, V3=24 V, V4=-12 V	V1=12.0 A, V2=4.0 A, V3=0.8 A, V4=0.8 A	V1=3.0 A, V2=0.1 A, V3=0.0 A, V4=0.0 A	V1=1% V2, V3, V4=3%

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
	Pin 12	V4
J3	Pin 1	RTN
	Pin 2	POWER FAIL/GOOD

### Notes

- Single output models: +/-2.5% for 12 V, +/-3% for 15 and 24 V, +/-2% for 48 V.  
Quad output models : +/-1% for V1; +/-5% for V2, V3, V4.
- Maximum current per output channel. Do not exceed total output power rating.
- 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.
- Power fail and power good signal on quad output models only.
- Specifications are for nominal input voltage, 25°C and max. load unless otherwise stated.
- 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, 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 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>4</sup>	Signal goes high after a delay of 100 ms once main output is within regulation band. Signal goes low 1.5 ms advance before output goes out of regulation due to mains failure

