

# LFZVC45 Series



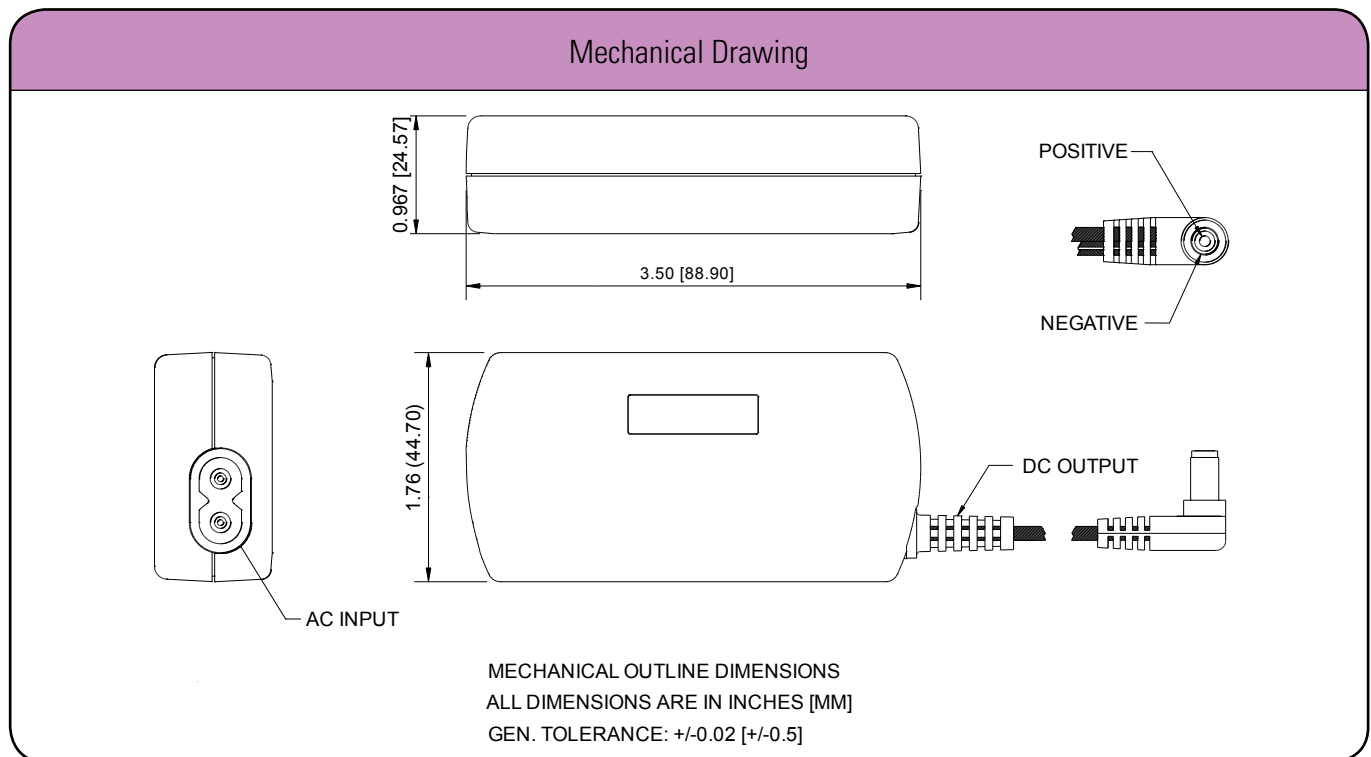
## Features

- High power density up to 8 W/in<sup>3</sup>
- Efficiency up to 90%
- Smallest 45 W adapter
- EN55022-B, FCC Part15 Level B Noise
- Class 2 safety approvals

## Electrical Specifications

AC Input	90–132 V & 180–264 V, Auto Ranging	
Input Frequency	47–63 Hz	
Input Current	120 VAC: 0.85 A max.	230 VAC: 0.45 A max.
Inrush Current	120 VAC: 20 A max.	230 VAC: 40 A max.
Leakage Current	120 VAC: < 140 $\mu$ A	230 VAC: < 250 $\mu$ A
Efficiency <sup>1</sup>	120 VAC: 88% typical	230 VAC: 90% typical
Hold-up Time	120 VAC: 10 ms	230VAC: 10 ms
Output Power	20 to 45 W	
Line Regulation	+/-0.5%	
Load Regulation	+/-5.0%	
Transient Response	< 3%; 25% load change from mid-level, 100 Hz, 50% duty cycle, 0.1 A/ $\mu$ s, recovery time for ZVC20/25 < 1 ms; ZVC36/45 < 3 ms	
Rise Time	< 10 ms	
Set Point Accuracy	+/-5%	
Over Current Protection	120% typical above rating	
Over Voltage Protection	Redundant feedback type	
Short Circuit Protection	Short term, autorecovery	
Switching Frequency	Boost converter: 95 kHz typical Resonant converter: 45 kHz typical	
Isolation Voltage	Min. 4243 VDC between input to output	
Operating Temperature	0 to 40°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	95% Rh, noncondensing	
MTBF	> 100 kh, MIL-HDBK 217F	
Cooling	Convection	

Model Number	Case Type	Voltage	Max. Load	Min. Load <sup>2</sup>	Ripple <sup>3</sup>
LFZVC20FS05E	FS	5 V	4.0 A	0.5 A	1.2%
LFZVC25FS09E	FS	9 V	2.77 A	0.2 A	1.0%
LFZVC36FS12E	FS	12 V	3.0 A	0.0 A	1.0%
LFZVC36FS15E	FS	15 V	2.4 A	0.0 A	1.0%
LFZVC36FS19E	FS	19 V	1.9 A	0.0 A	1.0%
LFZVC36FS24E	FS	24 V	1.5 A	0.0 A	1.0%
LFZVC45FS19E	FS	19 V	2.36 A	0.0 A	1.0%
LFZVC45FS24E	FS	24 V	1.87 A	0.0 A	1.0%



### Notes

1. For 5 V efficiency is 82% typical.
2. At no load output will be +/-10%. For ZVC36/45 requires 20 mA min. load for output to be within regulation band.
3. 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.
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	IEC320 C8
DC Output Connector	Right angle plug; ID: 2.54 mm, OD: 5.54 mm Barrel length: 9.6 mm. Center positive polarity Cable length: 40 inches
Dimensions	3.5 x 1.76 x 0.967 inches (88.9 x 44.7 x 24.57 mm)
Weight	150 g

### EMC

CE Mark	Complies with LVD and EMC Directives
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
Surge Susceptibility	EN61000-4-5, Level-3

### Safety

Safety Standard(s)	IEC60950-1 (ed.2), CSA C22.2 No. 60950 (2nd Edition), UL60950-1 (2nd Edition), EN60950-1, Class 2 SELV
Approval Agency	Nemko, UL, C-UL
Safety File Number(s)	Nemko: P11214468 UL: E150565

### Derating Curve

