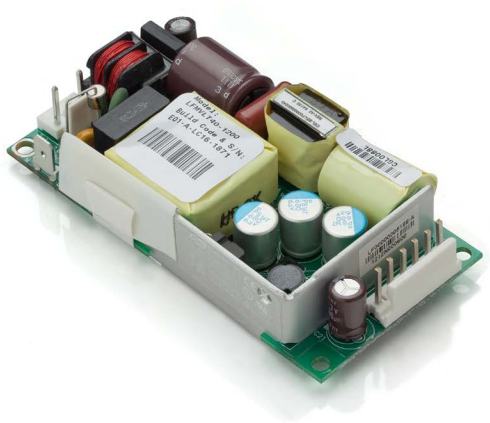
40 Watt Industrial (VLT)



Features

- 40 W convection-cooled rating
- Small 4 x 2 x 1.07 inches form factor
- High efficiency > 82%
- Single to triple outputs
- Low conducted and radiated noise
- Patented resonant topology
- Cover kit accessory available

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: 40 A max.	230 VAC: 75 A max.
Leakage Current	120 VAC: < 500 µA	230 VAC: < 1000 µA
Efficiency[1]	120 VAC: 80% typical	230 VAC: 80% typical
Hold-up Time	120 VAC: 6 ms	230 VAC: 6 ms
Output Power	40 W	
Line Regulation	+/–0.3%	
Load Regulation	V1: +/–0.5%; V2 & V3: +/–5%	
Transient Response	< 10%, 50% to 100% load change, 50/60 Hz, 50% duty cycle, 0.1 A/µs, recovery time < 5 ms	
Rise Time	< 100 ms	
Set Point Tolerance	V1: +/–3%; V2 & V3: +/–5%	
Over Current Protection	130% typical above rating	
Over Voltage Protection (For V1 & triple output model only)	3.95 V +/–0.25 V for 3.3 V; 6.2 V +/–0.4 V for 5 V	
Short Circuit Protection	Short term, autorecovery	
Switching Frequency	Boost converter: 105 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, noncondensing	
Altitude	Operating: 10,000 ft.; Nonoperating: 40,000 ft.	
MTBF	0.91m Hours, Telcordia SR332 Issue-3	
Isolation Voltage	Min. 4242 VDC between input to output	
Cooling	Convection	

Model Number	Voltage	Max. Load[2]	Min. Load	Ripple[3]
LFVLT40–1200	V1=5.1 V	8.0 A	0.2 A	1%
LFVLT40–1201	V1=12 V	3.5 A	0.1 A	1%
LFVLT40–1202	V1=15 V	2.7 A	0.1 A	1%
LFVLT40–1203	V1=24 V	1.7 A	0.05 A	1%
LFVLT40–1204	V1=48 V	0.83 A	0.05 A	1%
LFVLT40–3200	V1=5.2 V, V2=12.5 V, V3=–12.8 V	V1=6.0 A, V2=2.0 A, V3=0.5 A	V1=0.5 A, V2=0.1 A, V3=0.0 A	1%
LFVLT40–3201	V1=5.2 V, V2=23.8 V, V3=–12.8 V	V1=6.0 A, V2=1.0 A, V3=0.5 A	V1=0.5 A, V2=0.1 A, V3=0.0 A	1%
LFVLT40–3202	V1=5.2 V, V2=14.6 V, V3=–14.8 V	V1=6.0 A, V2=1.5 A, V3=0.5 A	V1=0.5 A, V2=0.1 A, V3=0.0 A	1%
LFVLT40–3203	V1=3.3 V, V2=5.2 V, V3=–12.8 V	V1=6.0 A, V2=3.0 A, V3=0.5 A	V1=1.0 A, V2=0.1 A, V3=0.0 A	V1=1.5%, V2, V3=1%
LFVLT60–CK metal cover kit accessory				

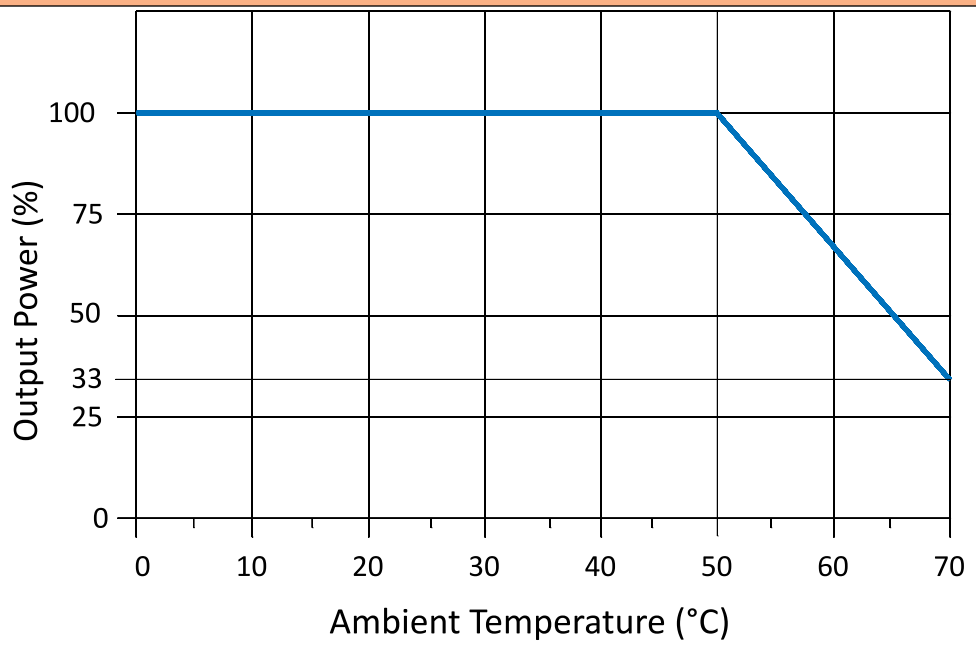
Connectors		
J1	Pin 1	AC NEUTRAL
	Pin 2	AC LINE
Spade Connector		EARTH
J2	Pin 1	V1
	Pin 2	V1
	Pin 3	RTN
	Pin 4	RTN
	Pin 5	V3
	Pin 6	V2

Notes

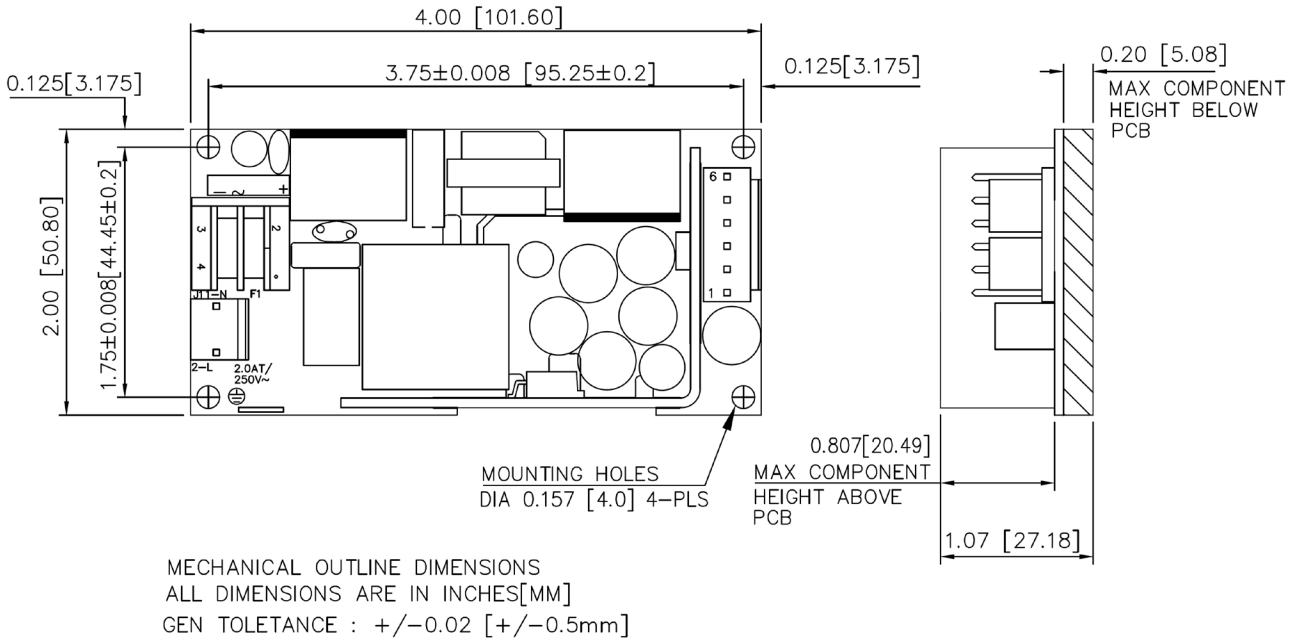
1. For VLT40–3203 efficiency is 75% typical.
2. Maximum current per output channel. Do not exceed total output power rating.
3. Ripple is peak to peak with 20 MHz bandwidth and 10 µF (Electrolytic capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. Specifications 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 (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: 640445–6 or equivalent Mating: 647402–6; Pins: 3–647409–1
Dimensions	4.0 x 2.0 x 1.07 inches (101.6 x 50.8 x 27.18 mm)
Weight	150 g
EMC	
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
Safety	
Safety Standard(s)	EN 60950-1:2006;A11;A1;A12;A2 IEC 60950-1(ed.2);am1;am2 UL 60950-1, 2nd Edition, CAN/CSA C22.2 No. 60950-1-07, 2nd Edition
Approval Agency	Nemko, UL, C–UL
Safety File Number(s)	Nemko: P16221200 UL: E150565 CB: NO92851

Derating Curve



Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN INCHES[MM]
GEN TOLETANCE : +/−0.02 [+/−0.5mm]

Notes: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following
1. Stand off, used to mount PCB has OD of 5.4 mm max.
2. Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
3. Washer, if used, to have dia of 6.5 mm max.