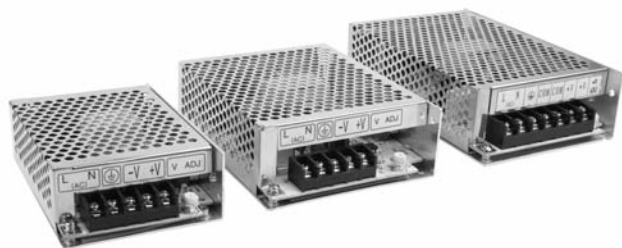


VCS Series



- Chassis Mount Industrial Supplies
- Green Mode, <0.5 W Standby Power
- Convection Cooled
- Class B Conducted & Radiated Emissions
- Output Voltages from 5 V to 48 V
- Low Cost

Specification

Input

Input Voltage	• 90-264 VAC (127-370 VDC), see derating curve
Input Frequency	• 47-63 Hz
Input Current	• VCS50: 1.1 A, VCSC70: 1.4 A, VCS100: 2.0 A typical at 90 VAC
Inrush Current	• 60 A max at 230 VAC
Power Factor	• 0.65 typical, meets EN61000-3-2 Class A
Earth Leakage Current	• 1.0 mA maximum
No Load Input Power	• 0.5 W maximum
Input Protection	• 3.15 A fuse fitted in live line

Output

Output Voltage	• See model table
Output Adjust	• $\pm 10.0\%$ (5 V & 12 V versions are -5% to +10%)
Initial Set Tolerance	• $\pm 1.0\%$
Minimum Load	• None required
Start Up Delay	• 1 s maximum
Hold Up Time	• 10 ms min at 115 VAC and full load
Line Regulation	• $\pm 0.5\%$, 90 VAC to 264 VAC input
Load Regulation	• $\pm 0.5\%$, (5 V & 12 V versions are 1%), 0% to 100% load
Transient Response	• Less than 4% deviation with a 50% to 75% load change at 1 A/ μ s. Output returns to within 1% in less than 500 μ s
Ripple & Noise	• 1% maximum for all voltages
Overvoltage Protection	• 120-140% of nominal output, recycle input AC to reset
Overload Protection	• 110-150% of nominal, trip and restart
Short Circuit Protection	• Trip and restart
Temperature Coefficient	• $\pm 0.03\%/^{\circ}\text{C}$ after 20 min warm up

General

Efficiency	• 5 V: 82% min, All other outputs: 85% min at 230 VAC and full load
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency MTBF	• 65 kHz typical • 50 kHrs, MIL-STD-217F at 25 $^{\circ}\text{C}$, GB

Environmental

Operating Temperature	• -10 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$, see derating curve, start up at -20 $^{\circ}\text{C}$
Cooling	• Convection cooled
Operating Humidity	• 0-95% R.H, non condensing
Storage Temperature	• -40 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$
Operating Altitude	• 3000 m, see note 1
Shock	• $\pm 3 \times 30$ g shocks in each plane, 30 g: 11 ms (± 0.5 ms), half sine, compliant to EN60068-2-27 & EN60068-2-47
Vibration	• Single axis 10-500 Hz at 2 g sweep and endurance at resonance in all 3 planes. Conforms to EN60068-2-6

EMC & Safety

Emissions	• EN55022 Class B conducted & radiated with output floating and earthed
Harmonic Currents	• EN61000-3-2 class A
Voltage Flicker	• EN61000-3-3, 4%
ESD Immunity	• EN61000-4-2, Level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, Installation Class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 3 Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 70% U_T for 10 ms, 40% U_T for 100 ms, <5% U_T for 5000 ms, Perf Criteria A, B, B
Safety Approvals	• IEC60950-1 (2005-12): CB Report CSA C22.2 No.60950-1-03, UL60950-1 (2003), TUV EN60950-1:2006

Notes

- 1 Requires extra air clearance over the table B2 in IEC60950-1:2001.
2. Tested according to SEMI F42. 100% load at 185 VAC, 50% load at 100 VAC.

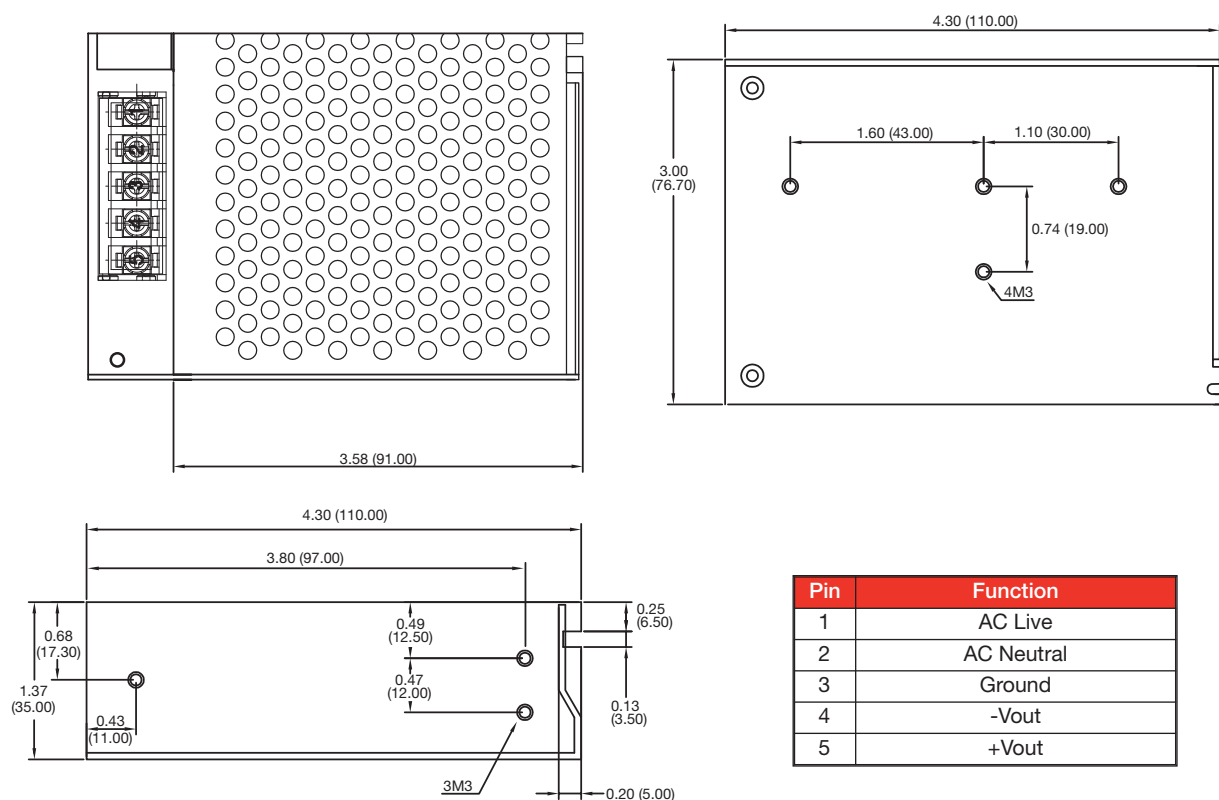
Model and Ratings

VCS50 XP

Output Power	Output Voltage	Maximum Output Current	Model Number
40 W	5.0 V	8.00 A	VCS50US05
50 W	12.0 V	4.20 A	VCS50US12
	15.0 V	3.30 A	VCS50US15
	24.0 V	2.10 A	VCS50US24
	36.0 V	1.39 A	VCS50US36
	48.0 V	1.05 A	VCS50US48

Mechanical Details

Weight: 551 lbs (250 g) approx



Pin	Function
1	AC Live
2	AC Neutral
3	Ground
4	-Vout
5	+Vout

Notes

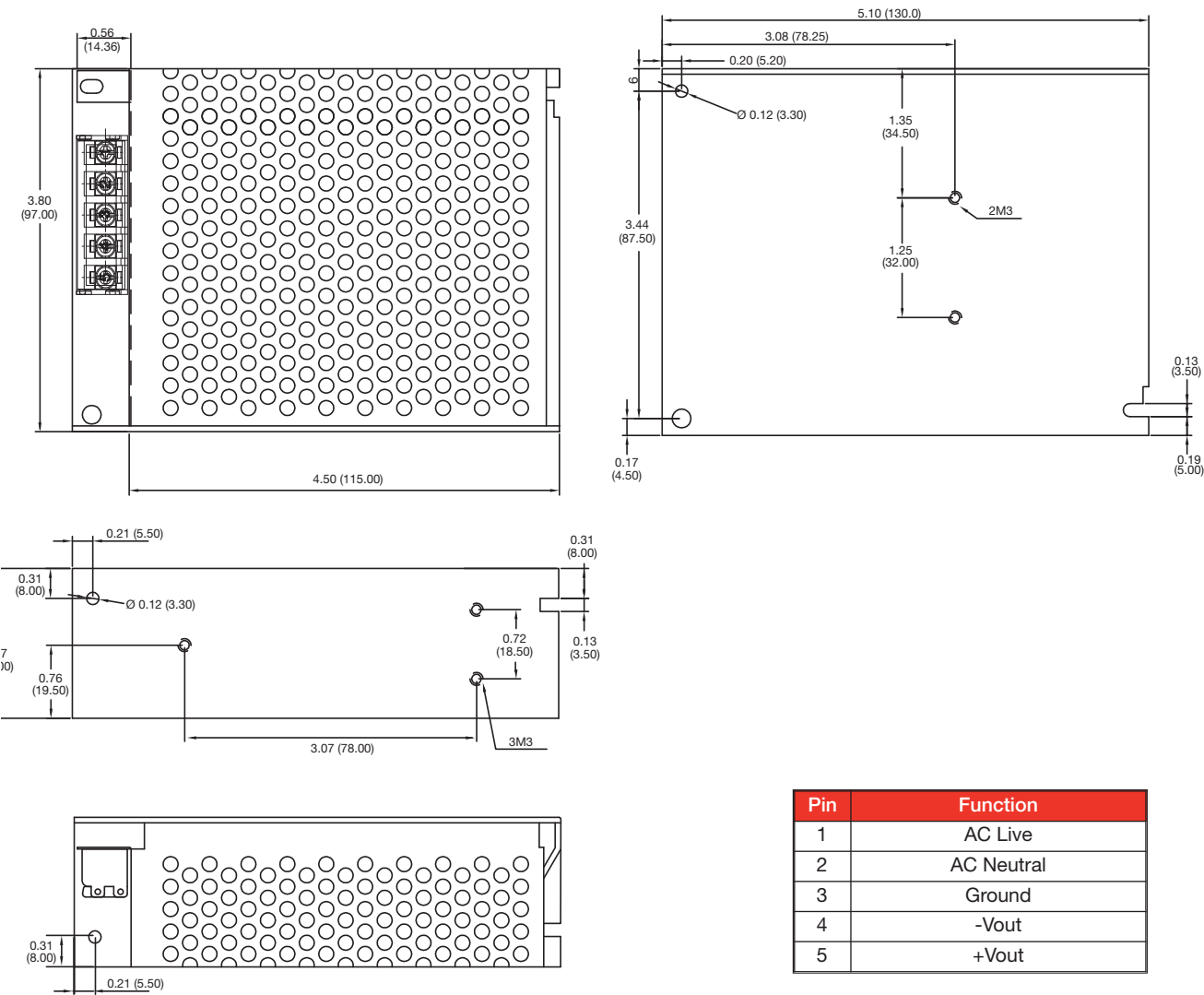
1. All dimensions are in inches (mm).

Model and Ratings

Output Power	Output Voltage	Maximum Output Current	Model Number
50 W	5.0 V	10.0 A	VCS70US05
70 W	12.0 V	5.83 A	VCS70US12
	15.0 V	4.67 A	VCS70US15
	24.0 V	2.92 A	VCS70US24
	36.0 V	1.94 A	VCS70US36
	48.0 V	1.46 A	VCS70US48

Mechanical Details

Weight: 881 lbs (400 g) approx



Pin	Function
1	AC Live
2	AC Neutral
3	Ground
4	-Vout
5	+Vout

Notes

1. All dimensions are in inches (mm).

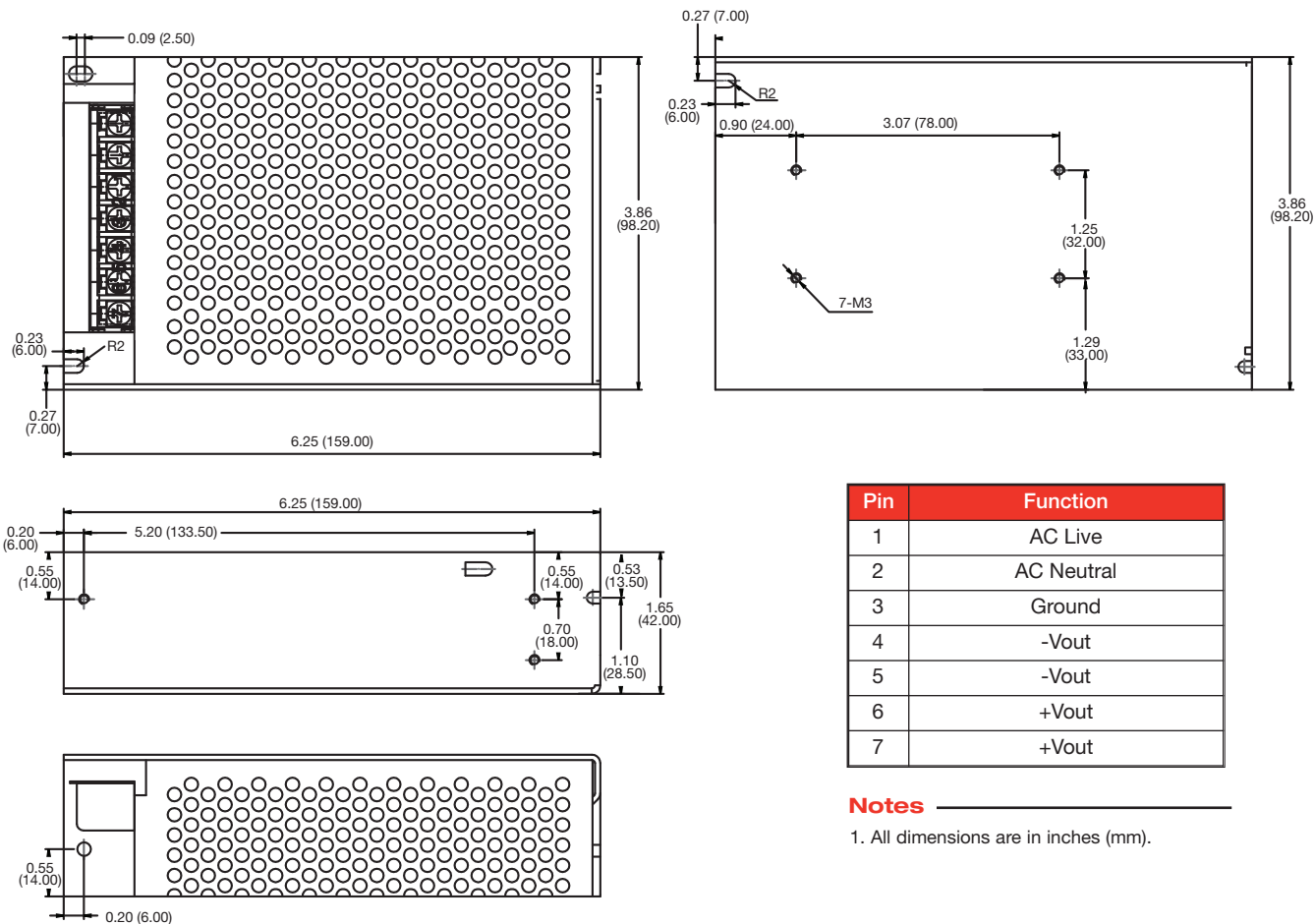
Model and Ratings

VCS100 **XP**

Output Power	Output Voltage	Maximum Output Current	Model Number
80 W	5.0 V	16.0 A	VCS100US05
100 W	12.0 V	8.33 A	VCS100US12
	15.0 V	6.67 A	VCS100US15
	24.0 V	4.17 A	VCS100US24
	36.0 V	2.78 A	VCS100US36
	48.0 V	2.08 A	VCS100US48

Mechanical Details

Weight: 1102 lbs (500 g) approx



Pin	Function
1	AC Live
2	AC Neutral
3	Ground
4	-Vout
5	-Vout
6	+Vout
7	+Vout

Notes

1. All dimensions are in inches (mm).

Derating Curves

