

50-100 Watts VCS Series



GREEN XP POWER

- Chassis Mount Industrial Supplies
- -25 °C to +70 °C Convection Cooled
- Class B Conducted & Radiated Emissions
- Output Voltages from 5 V to 48 V
- <0.5 W No Load Input Power
- Low Cost

Specification

Input

Input Voltage	• 85-264 VAC (127-370 VDC), see derating curve
Input Frequency	• 47-63 Hz
Input Current	• VCS50: 1.1 A, VCS70: 1.4 A, VCS100: 2.0 A typical at 90 VAC
Inrush Current	• 60 A max at 230 VAC, cold start at 25 °C
Power Factor	• EN61000-3-2 Class A
Earth Leakage Current	• 1.0 mA maximum
Input Protection	• 50 & 70 W: T3.15 A/250 V 100 W: T4.0A/250 V, fuse fitted in live line
No Load Input Power	• <0.5 W

Output

Output Voltage	• See model table
Output Adjust	• ±10.0% (5 V & 12 V versions are -5% to +10%)
Initial Set Tolerance	• ±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	• ±0.5%, 90 VAC to 264 VAC input
Load Regulation	• 5 V & 12 V versions: ±1%, Others: ±0.5% 0% to 100% load
Transient Response	• Less than 4% deviation with a 50% to 75% load change at 1 A/μs. Output returns to within 1% in less than 500 μs
Ripple & Noise	• 1% maximum pk-pk, 20 MHz bandwidth
Overvoltage Protection	• 120-140% of nominal output, auto recovery
Overload Protection	• 110-150% of nominal, trip and restart
Short Circuit Protection	• Continuous trip and restart
Temperature Coefficient	• ±0.03%/°C after 20 min warm up

General

Efficiency	• See tables
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 65 kHz typical
MTBF	• >500 kHrs to MIL-STD-217F at 25 °C, GB

Environmental

Operating Temperature	• -25 °C to +70 °C, see derating curve
Cooling	• Convection cooled
Operating Humidity	• 0-95% R.H, non-condensing
Storage Temperature	• -40 °C to +80 °C
Operating Altitude	• 3000 m
Shock	• ±3 x 30 g shocks in each plane, 30 g: 11 ms (±0.5 ms), half sine, compliant to EN60068-2-27 & EN60068-2-47
Vibration	• 10-500 Hz at 2 g sweep and endurance at resonance in all 3 planes. Conforms to EN60068-2-6

EMC & Safety

Emissions	• EN55032 Class B conducted & radiated
Harmonic Currents	• EN61000-3-2 class A
Voltage Flicker	• EN61000-3-3
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 (note 3)
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, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• IEC60950-1, CSA C22.2 No.60950-1-03, UL60950-1, TUV EN60950-1, UL62368-1, EN62368-1, IEC62368-1

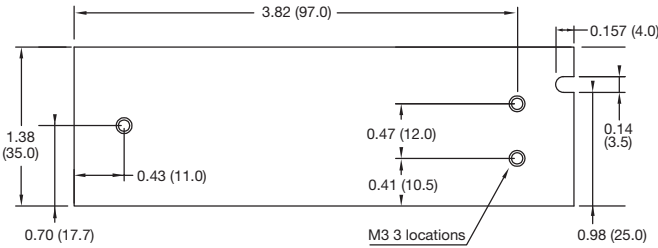
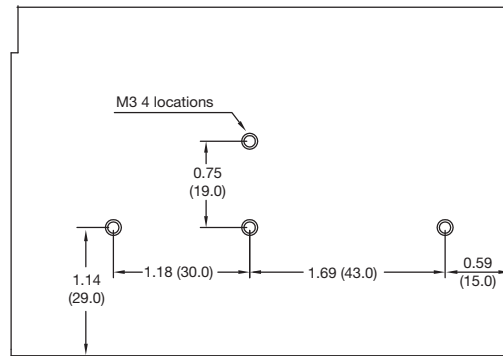
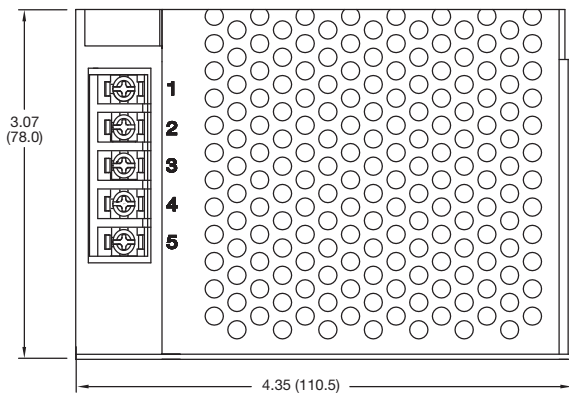
Model and Ratings

Output Power	Output Voltage	Output Current	Ripple & Noise ⁽²⁾	Efficiency ⁽¹⁾	Model Number
40 W	5.0V	8.00 A	50 mV	79%	VCS50US05
50 W	12.0V	4.20 A	120 mV	85%	VCS50US12
	15.0V	3.30 A	150 mV	86%	VCS50US15
	24.0V	2.10 A	240 mV	88%	VCS50US24
	48.0V	1.05 A	480 mV	88%	VCS50US48

Notes

1. Minimum average of efficiencies measured at 25%, 50%, 75% & 100% load.
2. Ripple & Noise may exceed specified values below -10 °C.
3. Level 3 performance criteria A is met for loads >2%. At no load, result is performance criteria A Level 2 or less than 4% output deviation at Level 3.

Mechanical Details

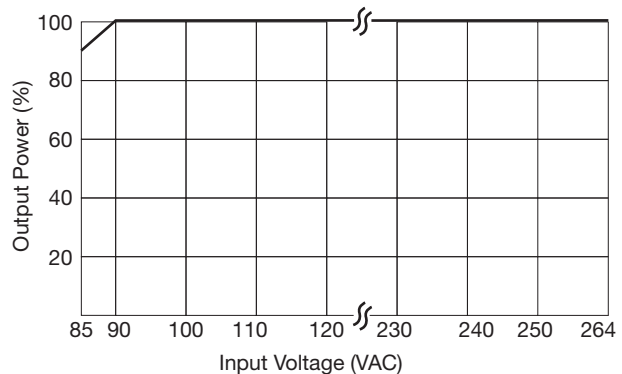
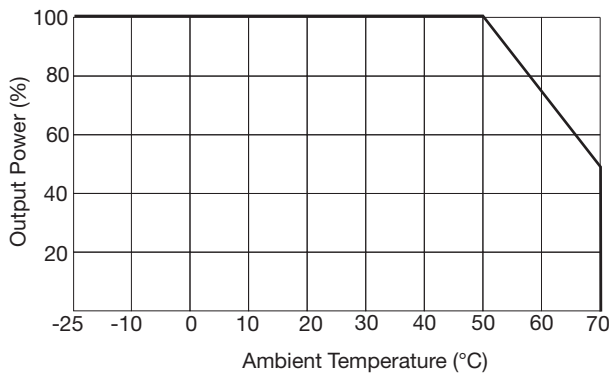


Pin	Function
1	AC Live
2	AC Neutral
3	Ground
4	-Vout
5	+Vout

Notes

1. All dimensions in inches (mm)
2. Weight: 0.55 lbs (250 g) approx
3. Tolerance ±0.02 (±0.5)
4. Maximum mounting screw penetration 0.157 (4.0) from outer surface
5. Screw terminal sizes M3

Derating Curves



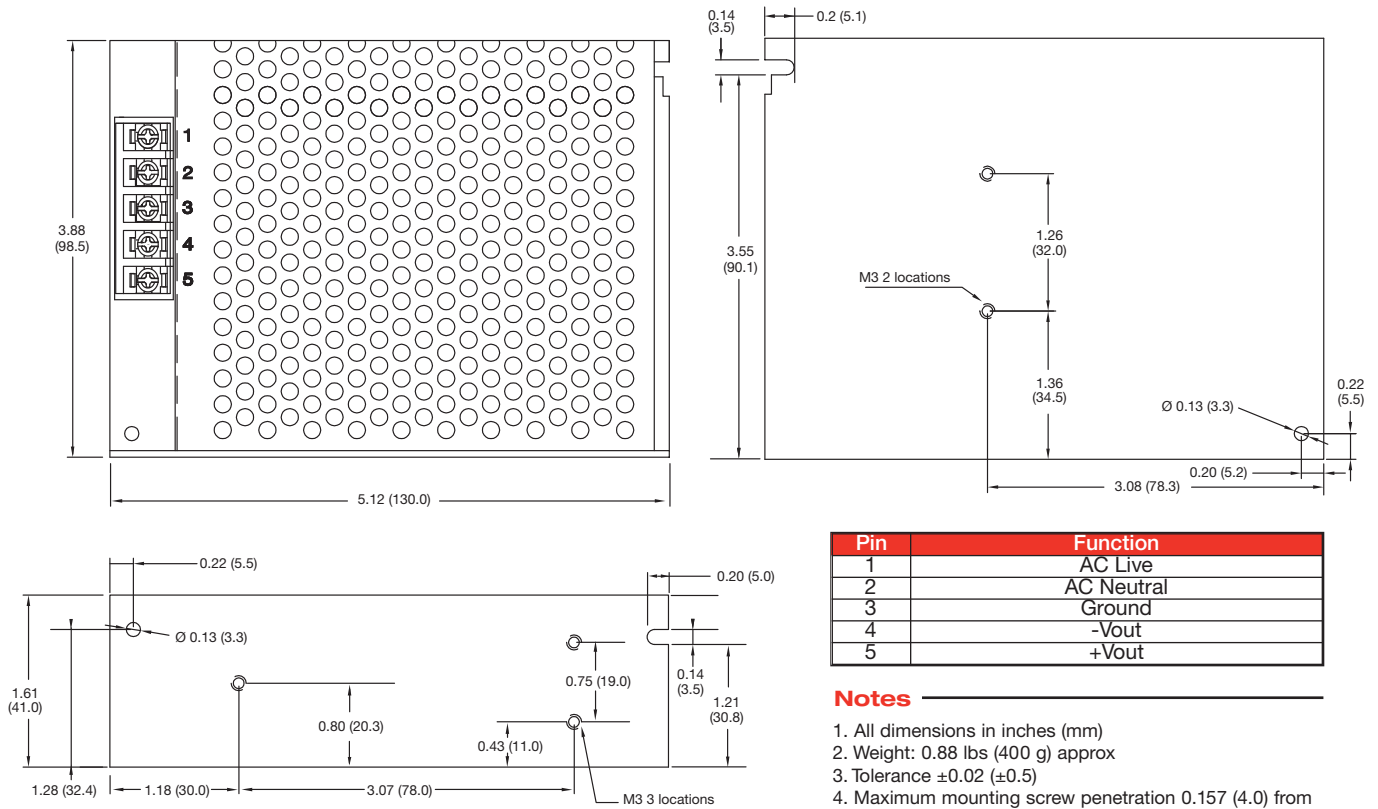
Model and Ratings

Output Power	Output Voltage	Output Current	Ripple & Noise ⁽²⁾	Efficiency ⁽¹⁾	Model Number
50 W	5.0V	10.0 A	50 mV	80%	VCS70US05
70 W	12.0V	5.83 A	120 mV	87%	VCS70US12
	15.0V	4.67 A	150 mV	87%	VCS70US15
	24.0V	2.92 A	240 mV	87%	VCS70US24
	48.0V	1.46 A	480 mV	87%	VCS70US48

Notes

1. Minimum average of efficiencies measured at 25%, 50%, 75% & 100% load.
2. Ripple & Noise may exceed specified values below -10 °C.
3. For all loads.

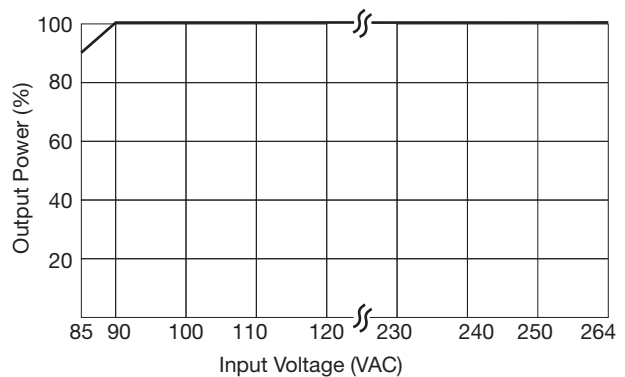
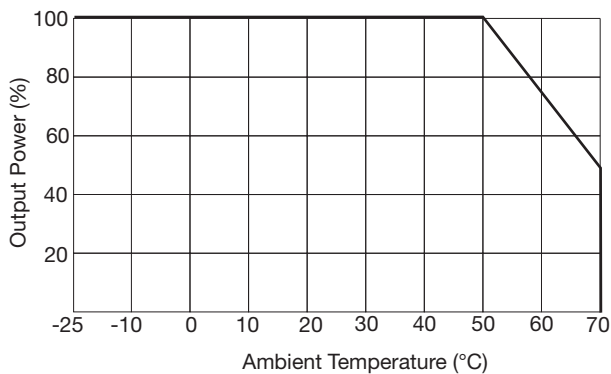
Mechanical Details



Notes

1. All dimensions in inches (mm)
2. Weight: 0.88 lbs (400 g) approx
3. Tolerance ± 0.02 (± 0.5)
4. Maximum mounting screw penetration 0.157 (4.0) from outer surface
5. Screw terminal sizes M3

Derating Curves



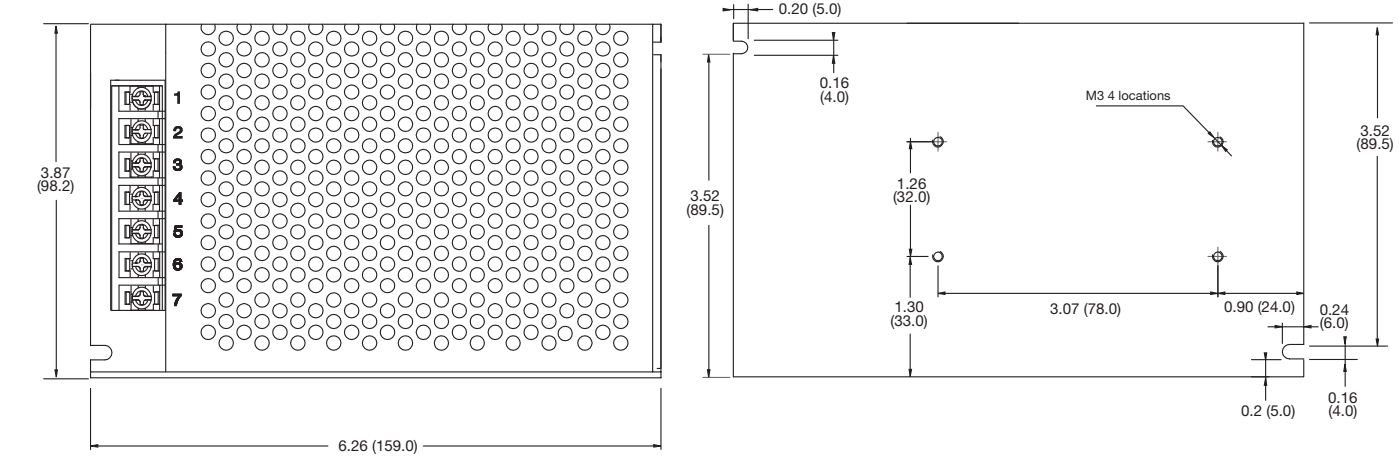
Model and Ratings

Output Power	Output Voltage	Output Current	Ripple & Noise ⁽²⁾	Efficiency ⁽¹⁾	Model Number
70 W	5.0V	14.0 A	50 mV	78.0%	VCS100US05
100 W	12.0V	8.33 A	120 mV	85.0%	VCS100US12
	15.0V	6.67 A	150 mV	86.0%	VCS100US15
	24.0V	4.17 A	240 mV	86.5%	VCS100US24
	48.0V	2.08 A	480 mV	88.0%	VCS100US48

Notes

1. Minimum average of efficiencies measured at 25%, 50%, 75% & 100% load.
2. Ripple & Noise may exceed specified values below -10 °C.
3. Level 3 performance criteria A is met for loads >10%. At no load, result is performance criteria A at Level 2 or less than 5% output deviation at Level 3.

Mechanical Details

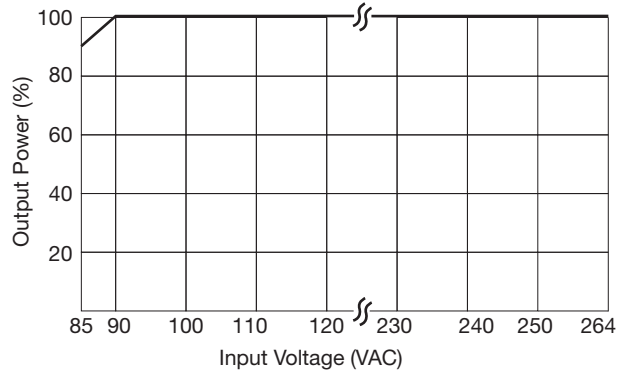
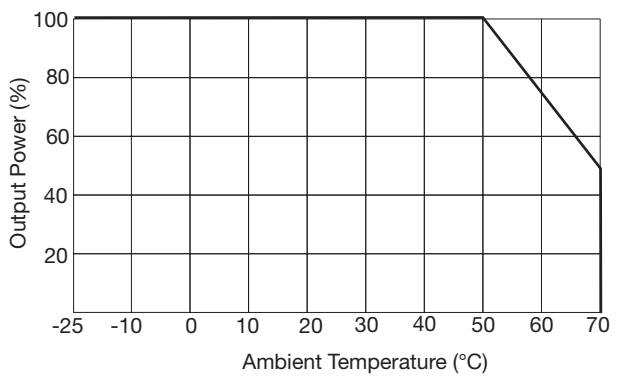


Pin	Function
1	AC Live
2	AC Neutral
3	Ground
4	-Vout
5	-Vout
6	+Vout
7	+Vout

Notes

1. All dimensions in inches (mm)
2. Weight: 1.1 lbs (500 g) approx
3. Tolerance ±0.02 (±0.5)
4. Maximum mounting screw penetration 0.157 (4.0) from outer surface
5. Screw terminal sizes M4

Derating Curves



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Switching Power Supplies](#) category:

Click to view products by [XP Power](#) manufacturer:

Other Similar products are found below :

[70841011](#) [73-551-0005](#) [73-551-0048](#) [PS3E-B12F](#) [PS3E-E12F](#) [AAD600S-4-OP](#) [R22095](#) [KD0204](#) [9021](#) [LDIN100150](#) [LPM000-BBAR-01](#)
[LPX17S-C](#) [EVS57-10R6/R](#) [FP80](#) [FRV7000G](#) [22929](#) [PS3E-F12F](#) [CQM1IA121](#) [40370121900](#) [VI-PU22-EXX](#) [40370121910](#) [LDIN5075](#)
[LPM615-CHAS](#) [LPX140-C](#) [09-160CFG](#) [70841025](#) [VPX3000-CBL-DC](#) [VI-LUL-IU](#) [LPM000-BBAR-05](#) [LPM000-BBAR-08](#) [LPM124-](#)
[OUTA1-48](#) [LPM000-BBAR-07](#) [LPM109-OUTA1-10](#) [LPM616-CHAS](#) [08-30466-1055G](#) [08-30466-2175G](#) [08-30466-2125G](#) [DMB-EWG](#)
[TVQF-1219-18S](#) [6504-226-2101](#) [CQM1IPS01](#) [SP-300-5](#) [CQM1-IPS02](#) [VI-MUL-ES](#) [22829](#) [08-30466-0065G](#) [VI-RU031-EWWX](#) [08-30466-](#)
[0028G](#) [EP3000AC48INZ](#) [VP-C2104853](#)