

VEP24 Series



- CEC2008 & EISA2007 Compliant
- Medical & ITE Approvals
- Interchangeable Input Connectors
- Class II Construction
- EN55022 Class B Emissions
- Low Cost
- Output Voltages from 5.0 V to 24.0 V Available

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.6 A max at 90 VAC
Inrush Current	• 50 A max at 240 VAC
Power Factor	• Conforms to EN61000-3-2, class A
No Load Input Power	• <0.3 W

Output

Output Voltage	• See table
Initial Set Accuracy	• $\pm 5\%$ at 50% load
Minimum Load	• No minimum load required
Start Up Delay	• 2s max
Start Up Rise Time	• 50 ms typical
Hold Up Time	• 5 ms typical at full load and 115 VAC
Line Regulation	• $\pm 0.5\%$ max
Load Regulation	• $\pm 5\%$ max
Transient Response	• 4% max. deviation, recovery to <1% within 500 μ s for a 50% step load change at 0.2 A/ μ s
Ripple & Noise	• See table
Overvoltage Protection	• See table
Overload Protection	• 120-280%, auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.2 %/ $^{\circ}$ C

General

Efficiency	• See table
Isolation	• 4000 VAC Input to Output
Switching Frequency	• 65 kHz typical
MTBF	• >250 kHrs per MIL-HDBK-217F @ 25 $^{\circ}$ C

Environmental

Operating Temperature	• 0 $^{\circ}$ C to +40 $^{\circ}$ C
Cooling	• Natural convection
Operating Humidity	• 5-95% RH, non-condensing
Storage Temperature	• -20 $^{\circ}$ C to +60 $^{\circ}$ C
Shock	• Able to survive 1m drop onto concrete on each of 6 axes
Vibration	• 10-300 Hz, 2 g 15 mins/sweep. 30 mins for each of 3 axes

EMC & Safety

Emissions	• EN55022, level B conducted & radiated
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, ± 4 kV contact, ± 8 kV air, Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2, Perf Criteria A
Surge	• EN61000-4-5, level 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, 3 V, Perf Criteria A
Magnetic Field	• EN61000-4-8, 1 A/m, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• EN60950, UL60950-1, IEC60950-1, CSA 60950-1-03, EN60601-1, UL60601-1, IEC60601-1, CSA C22.2 N $^{\circ}$ 601.1, China Compulsory Certification (CCC) Qualified

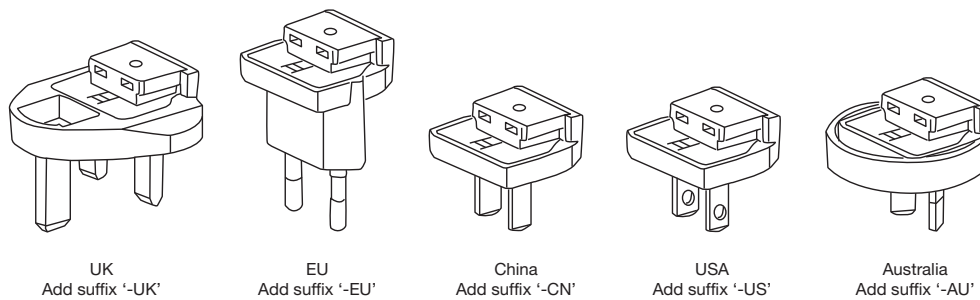
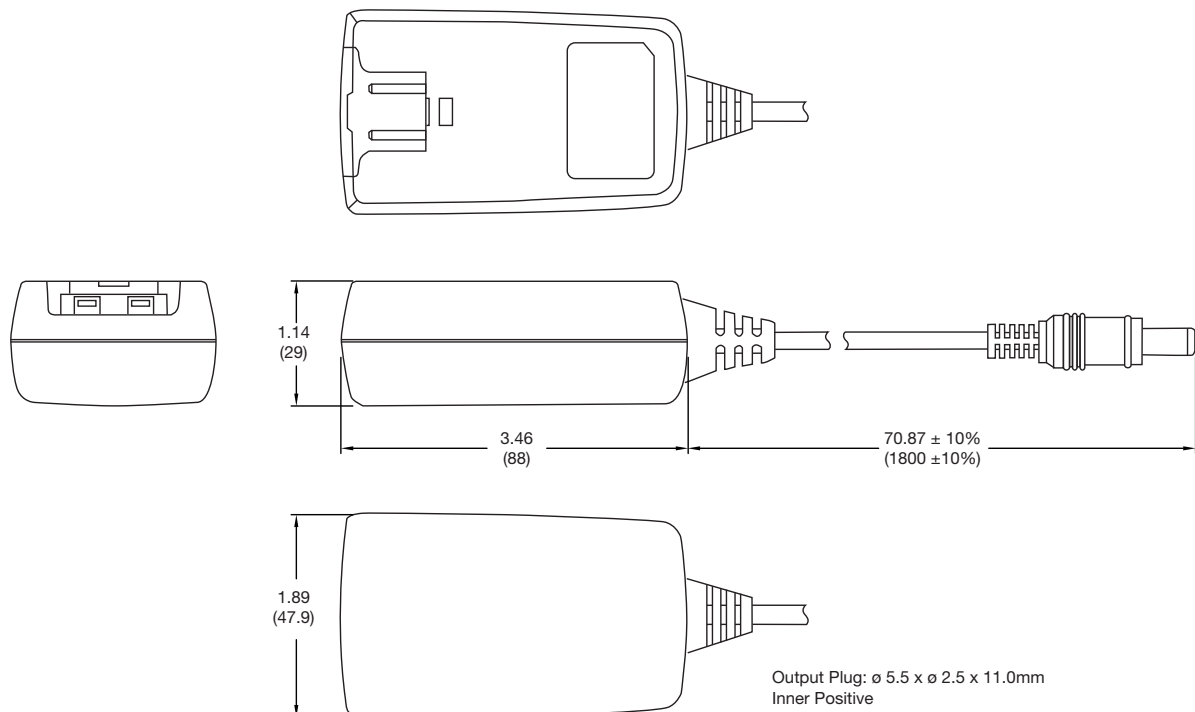
Models and Ratings

Output Power	Output Voltage ⁽³⁾	Output Current	Ripple & Noise ⁽¹⁾	Oversoltage Trip ⁽⁵⁾	Efficiency ⁽⁴⁾	Model Number ⁽²⁾
12.5 W	5 V	2.5 A	100 mV	10 V	73%	VEP24US05
19.8 W	9 V	2.2 A	100 mV	18 V	77%	VEP24US09
24 W	12 V	2.0 A	100 mV	20 V	78%	VEP24US12
24 W	15 V	1.6 A	100 mV	25 V	78%	VEP24US15
24 W	24 V	1 A	100 mV	35 V	78%	VEP24US24

Notes

1. Measured at end of DC output lead using 20 MHz band width and 0.1 μ F ceramic capacitor in parallel with 10 μ F electrolytic capacitor placed at connector terminals.
2. A suffix denoting the type of mains plug required must be added to the part number. See below.
3. Other voltages between 3.0 V and 24.0 V are available on request, consult sales for details.
4. Efficiency given is the average of efficiencies measured with output loads of 25%, 50%, 75% and 100%.
5. Typical trip point.

Mechanical Details



Notes

1. All measurements are in inches (mm). Tolerance is ± 0.04 (± 1) maximum, except output cable length
2. Weight 160g Approx
3. Case material is PC Class 94 V-0
4. Output Lead: UL2468 18-24 AWG
5. Mains plugs can be ordered separately. Part numbers are: VEP PLUG UK, VEP PLUG EU, VEP PLUG CN, VEP PLUG US or VEP PLUG AU