15 Watts

VEP15 Series



- Energy Star Level V
- CEC2008 & EISA2007 Compliant
- Medical & ITE Approvals
- Interchangeable Input Connectors
- Class II Construction
- Low Cost
- Output Voltages from 3.0 V to 24.0 V available

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.4 A max at 90 VAC
Inrush Current	• 40 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	• ±5% at 50% load
Minimum Load	• No minimum load required
Start Up Delay	• 2 s max
Start Up Rise Time	• 100 ms typical
Hold Up Time	• 5 ms typical at full load and 115 VAC
Line Regulation	• ±0.5% max
Load Regulation	• ±5% max
Transient Response	• 4% max. deviation, recovery to <1% within 500 µs for a 50% step load change at 0.2 A/µs
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 %/°C

General

Efficiency	• 79% min, see note 4
Isolation	• 4000 VAC Input to Output
Switching Frequency	• 132 kHz typical
MTBF	• >250 kHrs per MIL-HDBK-217F

Environmental

Operating Temperature	• 0 °C to +40 °C
Cooling	• Natural convection
Operating Humidity	• 5-95% RH, non-condensing
Storage Temperature	• -20 °C to +60 °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, ±4kV contact, ±8kV 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, cUL60950, IEC60950, EN60601-1, cUL60601-1, IEC60601-1

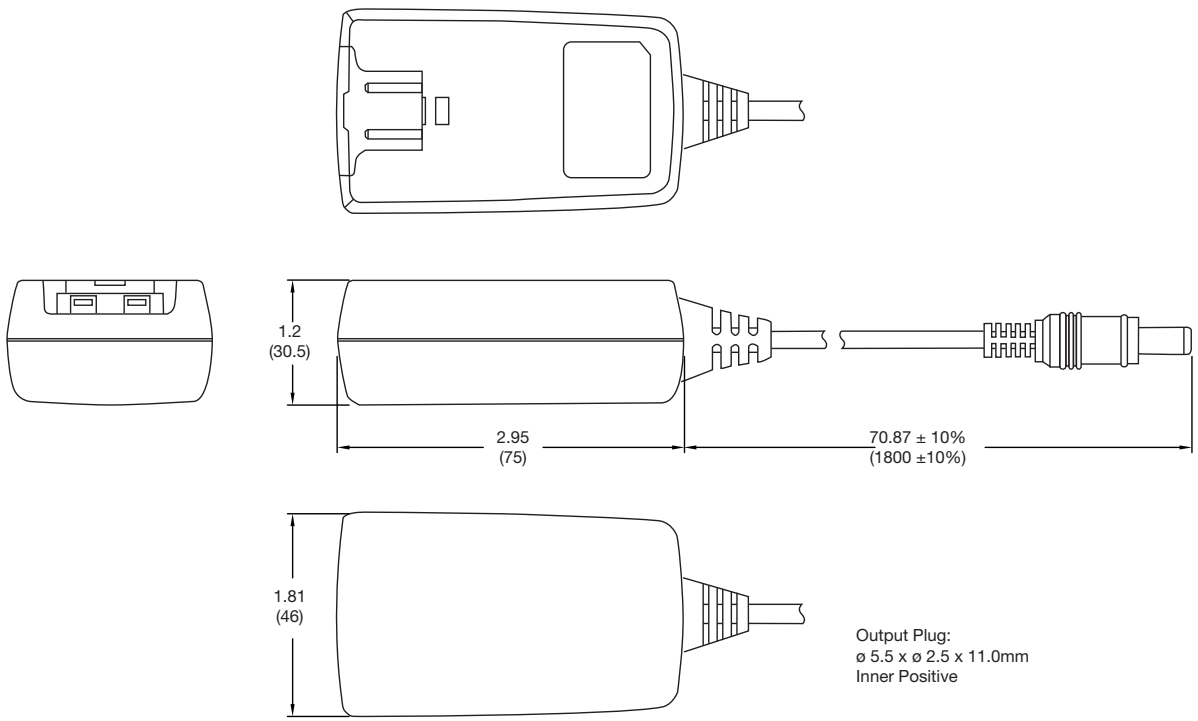
Models and Ratings

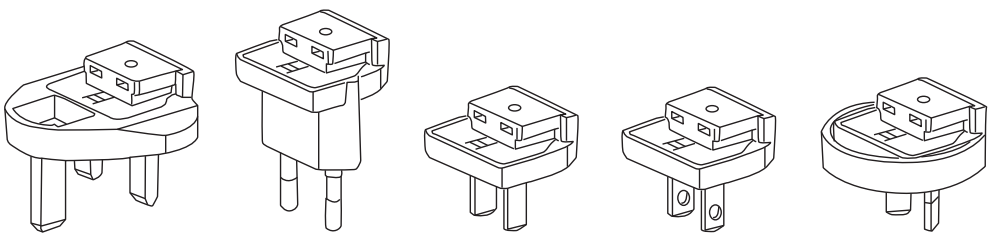
Output Power	Output Voltage (3)	Output Current	Ripple & Noise (1)	Overvoltage Trip (5)	Model Number (2)
6.6 W	3.3 V	2.00 A	50 mV	10 V	VEP15US033
10 W	5 V	2.00 A	50 mV	10 V	VEP15US05
12.6 W	9 V	1.40 A	100 mV	18 V	VEP15US09
15 W	12 V	1.25 A	100 mV	20 V	VEP15US12
15 W	15 V	0.90 A	150 mV	25 V	VEP15US15
15 W	24 V	0.63 A	200 mV	35 V	VEP15US24

Notes

1. Measured at end of DC output lead using 20 MHz band width and 0.1 µF ceramic capacitor in parallel with 10 µF 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, 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





UK
Add suffix '-UK'

EU
Add suffix '-EU'

China
Add suffix '-CN'

USA
Add suffix '-US'

Australia
Add suffix '-AU'

Notes

1. All measurements are in inches (mm). Tolerance is ±0.04 (±1) maximum, except output cable length.
2. Weight 120g approx
3. Case material is PC Class 94 V-0
4. Output lead UL2468 18-24 AWG