

VEP24 Series



- CEC2008 & EISA2007 Compliant
- Medical & ITE Approvals
- Interchangeable Input Connectors
- Class II Construction
- EN55022 Class B Emissions
- 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 | • 0.6 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 |

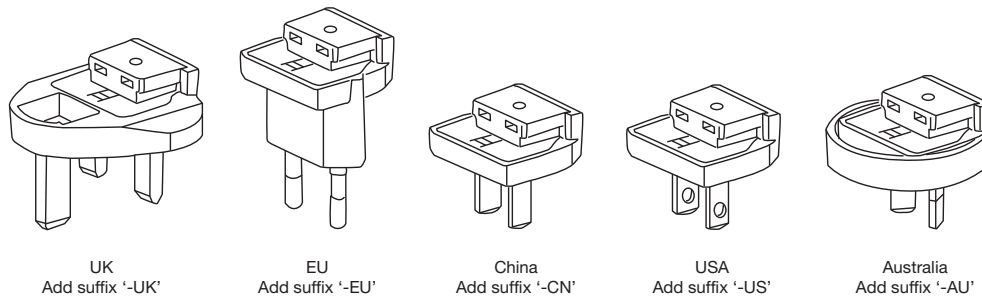
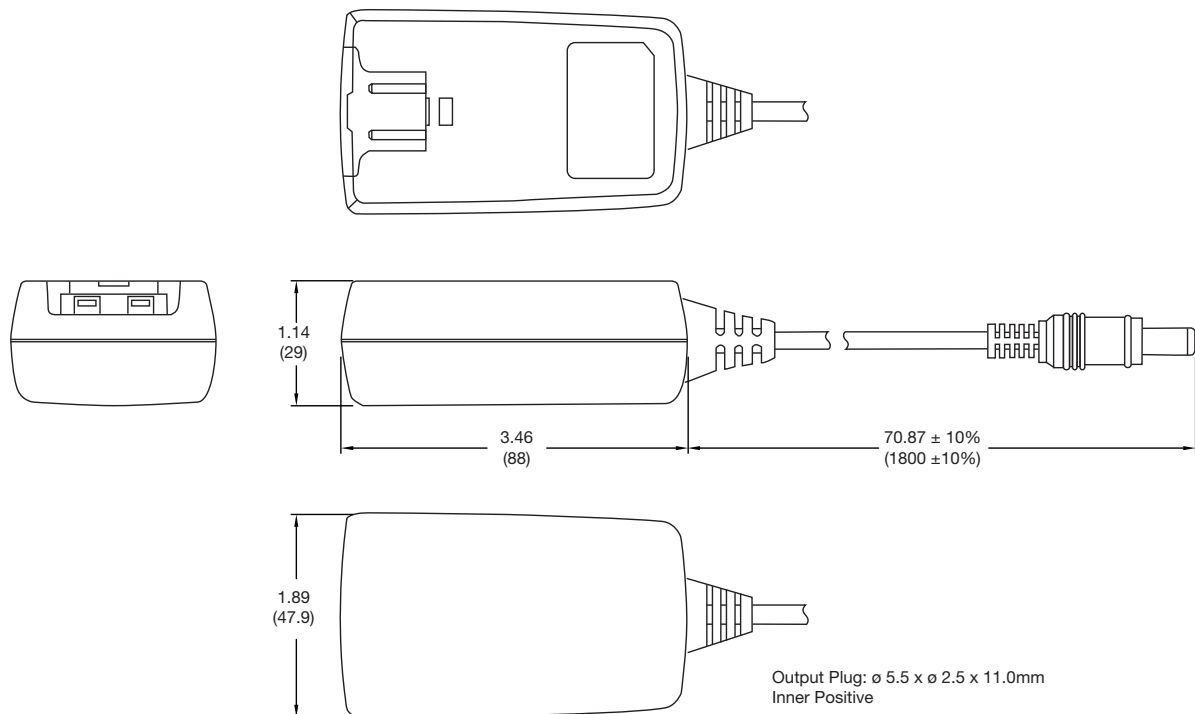
Models and Ratings

| Output Power | Output Voltage ⁽³⁾ | Output Current | Ripple & Noise ⁽¹⁾ | Oversoltage Trip ⁽⁵⁾ | Efficiency ⁽⁴⁾ | Model Number ⁽²⁾ |
|--------------|-------------------------------|----------------|-------------------------------|---------------------------------|---------------------------|-----------------------------|
| 8.25 W | 3.3 V | 2.5 A | 100 mV | 10 V | 69% | VEP24US033 |
| 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 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 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