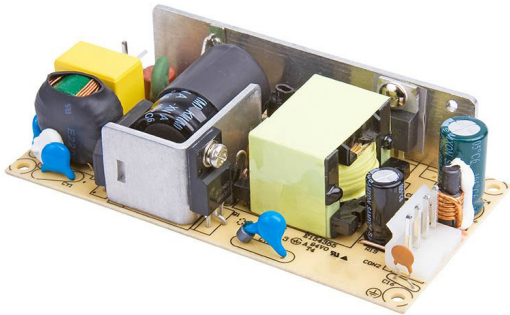


60 Watts VCT Series



- Low Cost
- Single Outputs from 5 V to 30 V
- Peak Load Capability
- Convection-cooled
- <0.5 W No Load Input Power
- 2"x 4" Package
- Fits 1U Applications

Specification

Input

| | |
|-----------------------|---|
| Input Voltage | • 85-264 VAC |
| Input Frequency | • 47-63 Hz |
| Input Current | • 1.7 A max at 115 VAC, 0.85 A max at 230 VAC |
| Inrush Current | • 80 A typ. at 230 VAC, cold start at 25 °C |
| Earth Leakage Current | • 500 µA at 264 VAC /60 Hz |
| Power Factor | • EN61000-3-2, class A |
| No Load Input Power | • <0.5 W |
| Input Protection | • Internal T3.15A/250 V fuse in line |

Output

| | |
|--------------------------|--|
| Output Voltage | • See table |
| Output Voltage Trim | • None |
| Initial Set Accuracy | • ±2% at 50 % load |
| Minimum Load | • No minimum load requirement |
| Start Up Delay | • 2 s max |
| Start Up Rise Time | • 8 ms typical |
| Hold Up Time | • 8 ms typical at full load and 115 VAC |
| Line Regulation | • ±0.5% max |
| Load Regulation | • ±1.0% max (see note 1) |
| Transient Response | • 4% maximum deviation, recovering to less than 1% within 500 µs for 50% step load |
| Ripple & Noise | • 1% max pk-pk (see note 2) |
| Overvoltage Protection | • See table |
| Overload Protection | • 133-166% |
| Short Circuit Protection | • Trip and restart (hiccup mode) |
| Temperature Coefficient | • 0.02% /°C |

General

| | |
|---------------------|--|
| Efficiency | • See table |
| Isolation | • 3000 VAC Input to Output 1500 VAC Input to Ground 500 VDC Output to Ground |
| Switching Frequency | • 60 kHz ±10 kHz |
| MTBF | • >700 kHrs to Bell Core iss. 6 |

Environmental

| | |
|-----------------------|---|
| Operating Temperature | • -10 °C to +70 °C derate from 100% load at 50 °C to 50% load at 70 °C |
| Cooling | • Natural convection |
| Operating Humidity | • 5% to 90% RH, non condensing |
| Operating Altitude | • 3000 m |
| Storage Temperature | • -20 °C to +85 °C |
| Shock | • IEC68-2-6, 30 g, 11 mins half sine, 3 times in each of 6 axes |
| Vibration | • IEC68-2-27, 10-500Hz, 2 g 10 mins / sweep. 60 mins for each of 3 axes |

EMC & Safety

| | |
|----------------------|---|
| Emissions | • EN55032, level 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, 10 V/m, 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, 10 V, Perf Criteria A |
| Dips & Interruptions | • EN61000-4-11, 30% 10 ms, 60%, 100 ms, 100%, 5000 ms Perf Criteria A, B, B |
| Safety Approvals | • UL60950-1, IEC60950-1, EN60950-1, UL62368-1, EN62368-1, IEC62368-1 |

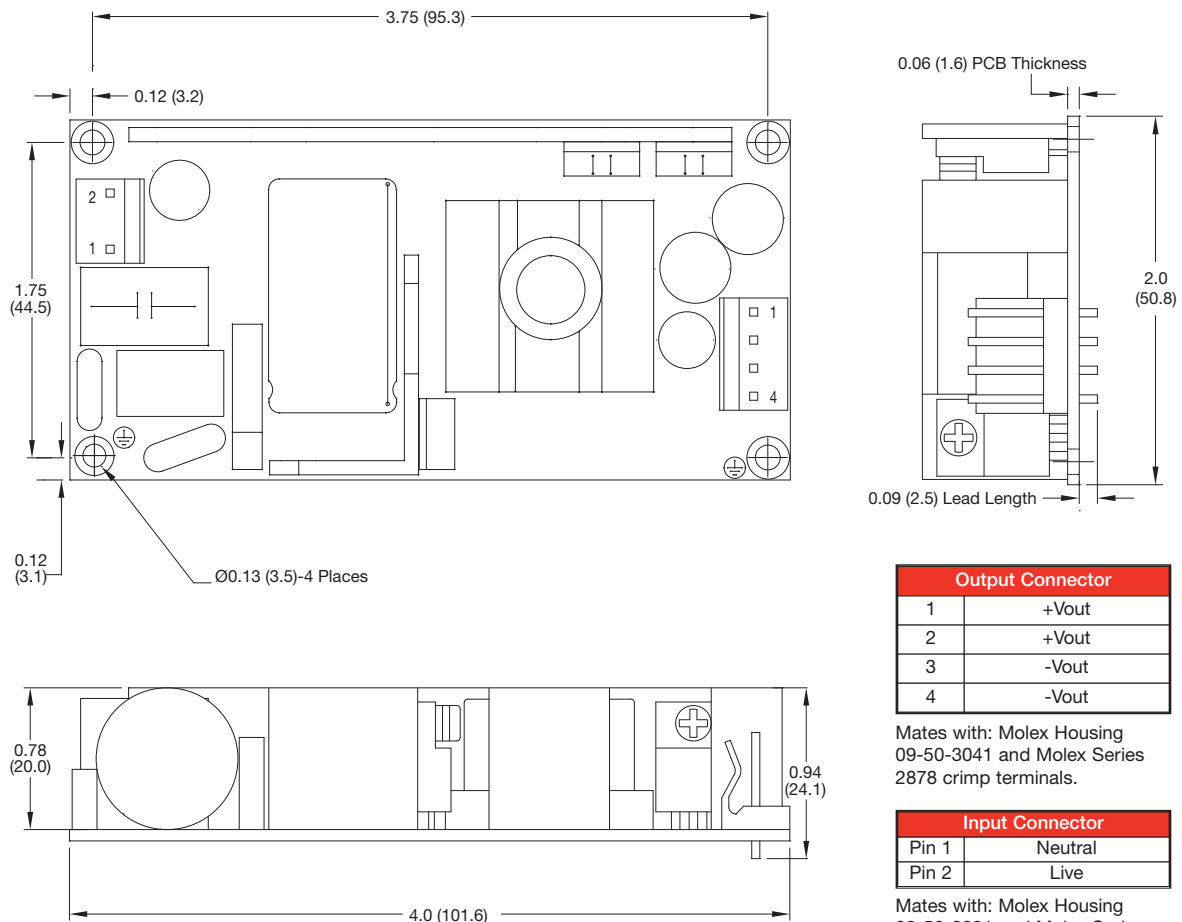
Models and Ratings

| Output Voltage ⁽⁶⁾ | Output Current | | OVP Setting ⁽⁵⁾ | Efficiency ⁽⁴⁾ | Model Number |
|-------------------------------|----------------|---------------------|----------------------------|---------------------------|--------------|
| | Nominal | Peak ⁽³⁾ | | | |
| 5.0 V | 8.00 A | 10.0 A | 7.0 V | 82% | VCT40US05 |
| 12.0 V | 5.00 A | 6.3 A | 13.0 V | 87% | VCT60US12 |
| 15.0 V | 4.00 A | 5.0 A | 17.0 V | 87% | VCT60US15 |
| 24.0 V | 2.50 A | 3.1 A | 29.0 V | 88% | VCT60US24 |

Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% \pm 40% full load).
2. Measured at the output connector with a 0.1 μ F ceramic capacitor and a 10 μ F electrolytic capacitor.
3. Peak load lasting <30 s with a maximum duty cycle of 10%, average output power not to exceed nominal.
4. Average of efficiencies measured at 25%, 50%, 75% & 100% load and 230 VAC input.
5. Typical trip point.
6. Other voltages between 5 V and 30 V available on request, contact sales for details.

Mechanical Details



| Output Connector | |
|------------------|-------|
| 1 | +Vout |
| 2 | +Vout |
| 3 | -Vout |
| 4 | -Vout |

Mates with: Molex Housing 09-50-3041 and Molex Series 2878 crimp terminals.

| Input Connector | |
|-----------------|---------|
| Pin 1 | Neutral |
| Pin 2 | Live |

Mates with: Molex Housing 09-50-3031 and Molex Series 2878 crimp terminals.

Mounting holes marked with \oplus must be connected to safety earth

Notes

1. All dimensions shown in inches (mm).
2. Weight 0.29 lbs (130 g) approx
3. Tolerance: x.xx = \pm 0.04 (x.x = \pm 0.1); x.xxx = \pm 0.2 (x.xx = \pm 0.5)