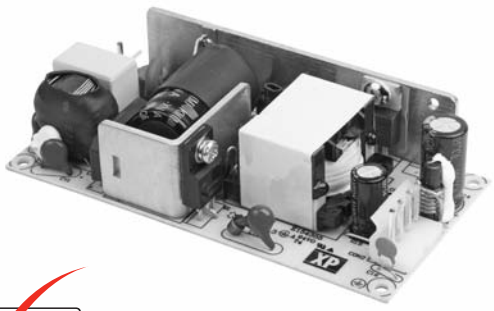
# 60 Watts
# VCT Series





- Low Cost
- Single Outputs from 5 V to 30 V
- Universal Input
- Convection Cooled
- <0.5 W No Load Input Power
- 2” x 4” Foot Print
- 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 | • 60 A max at 230 VAC |
| Earth Leakage Current | • 500 µA max |
| Power Factor | • Conforms to EN61000-3-2, Class A |
| No Load Input Power | • 0.48 W max |

### Output

| | |
|---|---|
| Output Voltage | • See tables |
| Output Voltage Trim | • None |
| Initial Set Accuracy | • ±2% at 50 % load |
| Minimum Load | • No minimum load requirement |
| Start Up Delay | • 500 ms 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 Tables |
| Overload Protection | • 133-166% |
| Short Circuit Protection | • Trip and restart (Hiccup) |
| Temperature Coefficient | • 0.02 %/˚C |

### General

| | |
|---|---|
| Efficiency | • See table |
| Isolation | • 3000 VAC Input to Output<br>1500 VAC Input to Ground<br>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 | • -10 ˚C to +85 ˚C |
| Shock | • IEC68-2-6, 30g, 11mins half sine, 3 times in each of 6 axes |
| Vibration | • IEC68-2-27, 10-500Hz, 2g 10 mins / sweep. 60 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, 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, IEC60950, EN60950 |

## Models and Ratings

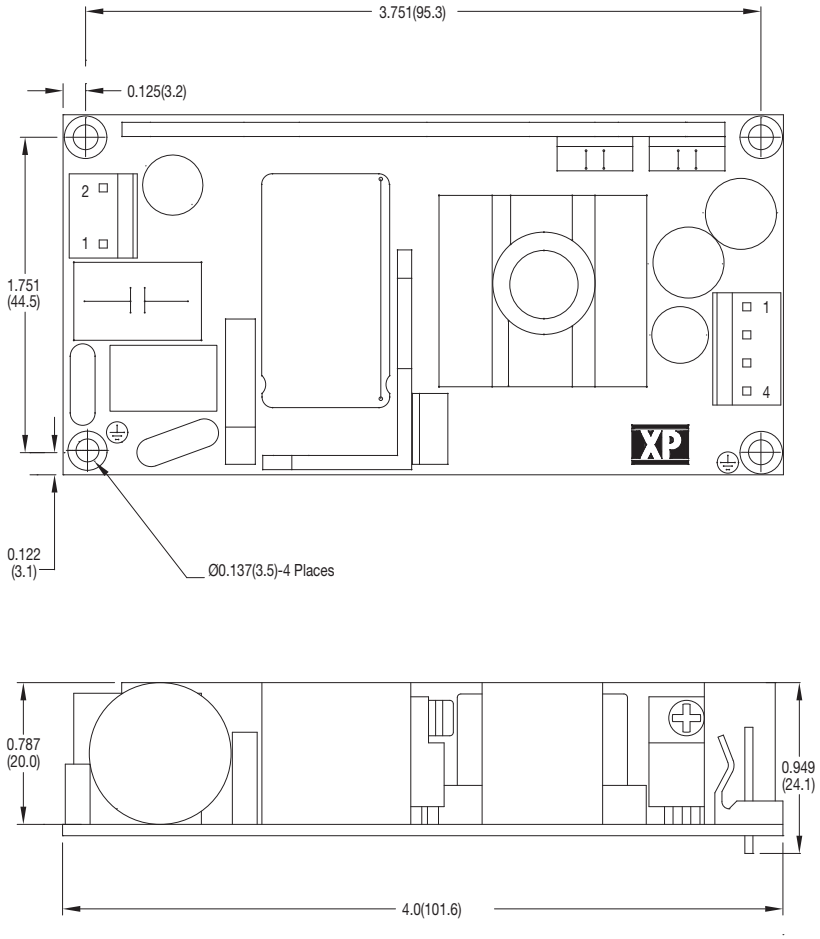
| Output Voltage | Output Current | | Over Voltage Trip Point[5] | Typical Efficiency[4] | Model Number |
|---|---|---|---|---|---|
| | Nominal | Peak[3] | | | |
| 5.0 V | 8.00 A | 10.0 A | 7 V | 82% | VCT40US05 |
| 5.3 V | 7.55 A | 9.5 A | 7 V | 82% | VCT40US053 |
| 12.0 V | 5.00 A | 6.3 A | 13 V | 87% | VCT60US12 |
| 15.0 V | 4.00 A | 5.0 A | 17 V | 87% | VCT60US15 |
| 16.0 V | 3.75 A | 4.7 A | 18 V | 87% | VCT60US16 |
| 18.0 V | 3.33 A | 4.2 A | 21 V | 87% | VCT60US18 |
| 19.0 V | 3.16 A | 4.0 A | 22 V | 87% | VCT60US19 |
| 20.0 V | 3.00 A | 3.8 A | 23 V | 87% | VCT60US20 |
| 24.0 V | 2.50 A | 3.1 A | 29 V | 88% | VCT60US24 |
| 30.0 V | 2.00 A | 2.5 A | 33 V | 88% | VCT60US30 |

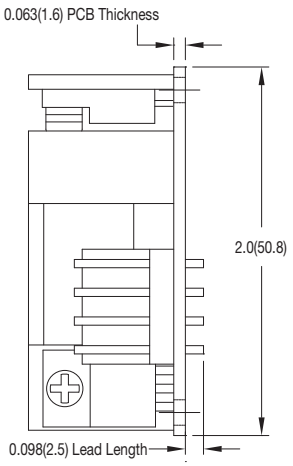
### Notes

*1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).*
*2. Measured at the output connector with a 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor.*
*3. Peak load lasting <30s with a maximum duty cycle of 10%, average output power not to exceed nominal.*
*4. Measured at 230 VAC input and full load output.*
*5. Typical trip point.*

## Mechanical Details

All dimensions shown in inches (mm).




| 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 09-50-3051 and Molex Series 2878 crimp terminals.
Mounting holes marked with ⏚ must be connected to safety earth

### Notes

*Weight 0.29 (130 g) approx*