

### 18 Watt

- Energy Efficiency Level VI
- European CoC Tier 2
- Universal Input
- Output Voltages from 9 V to 24 V
- Class II Construction
- Low Cost



The VET18 series of desk-top power supplies comply with the very latest energy efficiency level VI standards with high active mode efficiency and extremely low no load power consumption. Available with a standard jack plug connector these adaptors suit a wide variety of cost sensitive applications while maintaining industry leading performance.

#### Dimensions:

##### VET18:

4.21 x 1.71 x 1.22" (107.0 x 43.5 x 31.0 mm)

### Models & Ratings

| Output Power | Output Voltage | Output Current | Total Regulation <sup>(2)</sup> | Output Connector          | Model Number    |
|--------------|----------------|----------------|---------------------------------|---------------------------|-----------------|
| 18 W         | 9.0 V          | 2000 mA        | 5%                              | 5.5 x 2.1 x 12 mm DC Jack | VET18US090C2-JA |
|              | 12.0 V         | 1500 mA        | 5%                              | 5.5 x 2.1 x 12 mm DC Jack | VET18US120C2-JA |
|              | 15.0 V         | 1250 mA        | 5%                              | 5.5 x 2.1 x 12 mm DC Jack | VET18US150C2-JA |
|              | 18.0 V         | 1000 mA        | 5%                              | 5.5 x 2.1 x 12 mm DC Jack | VET18US180C2-JA |
|              | 24.0 V         | 750 mA         | 5%                              | 5.5 x 2.1 x 12 mm DC Jack | VET18US240C2-JA |

#### Notes

1. Other output voltages available, contact sales for details.

2. Total regulation includes initial set accuracy, line and load regulation.

### Input

| Characteristic      | Minimum                     | Typical | Maximum | Units | Notes & Conditions           |
|---------------------|-----------------------------|---------|---------|-------|------------------------------|
| Input Voltage       | 90                          |         | 264     | VAC   |                              |
| Input Frequency     | 47                          |         | 63      | Hz    |                              |
| Input Current       |                             |         | 0.6     | A     | 100 VAC                      |
| Inrush Current      |                             |         | 80      | A     | 240 VAC, cold start at 25 °C |
| Power Factor        |                             |         |         |       | EN61000-3-2, class A         |
| No Load Input Power |                             |         | 75      | mW    |                              |
| Input Protection    | Internal T1.0A/250 VAC fuse |         |         |       |                              |

### Output

| Characteristic           | Minimum | Typical | Maximum | Units       | Notes & Conditions  |
|--------------------------|---------|---------|---------|-------------|---|
| Output Voltage           | 9       |         | 24      | V           | See Models and Ratings table  |
| Minimum Load             | 0       |         |         | A           | No minimum load required  |
| Start Up Delay           |         |         | 4       | s           |   |
| Start Up Rise Time       |         | 30      |         | ms          |   |
| Hold Up Time             | 8       |         |         | ms          | Full load and 100 VAC   |
| Total Regulation         |         |         | 5       | %           | See Models and Ratings table  |
| Transient Response       |         |         | 4       | % deviation | Recovery within <1% within 500 µs for a 50% step load change at 0.15 A/µs                       |
| Ripple & Noise           |         |         | 150     | mV pk-pk    | Measured with 20 MHz bandwidth and 47 µF electrolytic in parallel with 0.1 µF ceramic capacitor |
| Short Circuit Protection |         |         |         |             | Continuous, trip and restart (hiccup mode) with auto recovery                                   |
| Temperature Coefficient  |         |         | 0.05    | %/°C        |   |

### General

| Characteristic            | Minimum | Typical       | Maximum | Units  | Notes & Conditions  |
|---------------------------|---------|---------------|---------|--------|---|
| Efficiency                |         | 85            |         | %      | Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 115 VAC input |
| Energy Efficiency         |         |               |         |        | Level VI  |
| Isolation                 | 3000    |               |         | VAC    | Input to Output   |
| Switching Frequency       | 24      |               | 70      | kHz    | Variable  |
| Mean Time Between Failure | 250     |               |         | kHrs   | MIL-HDBK-217F at 25 °C GB   |
| Weight                    |         | 0.302 (137.0) |         | lb (g) |   |

### Environmental

| Characteristic        | Minimum | Typical | Maximum | Units | Notes & Conditions                                  |
|-----------------------|---------|---------|---------|-------|---|
| Operating Temperature | 0       |         | +60     | °C    | Derate from 100% load at 40 °C to 50% load at 60 °C |
| Storage Temperature   | -40     |         | +85     | °C    |   |
| Operating Humidity    | 5       |         | 95      | %     | RH, non-condensing                                  |
| Cooling               |         |         |         |       | Natural convection                                  |
| Shock                 |         |         |         |       | 1 m drop onto concrete on each of 6 axes            |
| Vibration             | 10      |         | 300     | Hz    | 2 g 15 mins/sweep, 60 mins for each of 3 axes       |

### EMC: Emissions

| Phenomenon       | Standard    | Test Level | Notes & Conditions |
|------------------|-------------|------------|--------------------|
| Conducted        | EN55032     | Level B    |                    |
| Radiated         | EN55032     | Level B    |                    |
| Harmonic Current | EN61000-3-2 | Class A    |                    |
| Voltage Flicker  | EN61000-3-3 |            |                    |

### EMC: Immunity

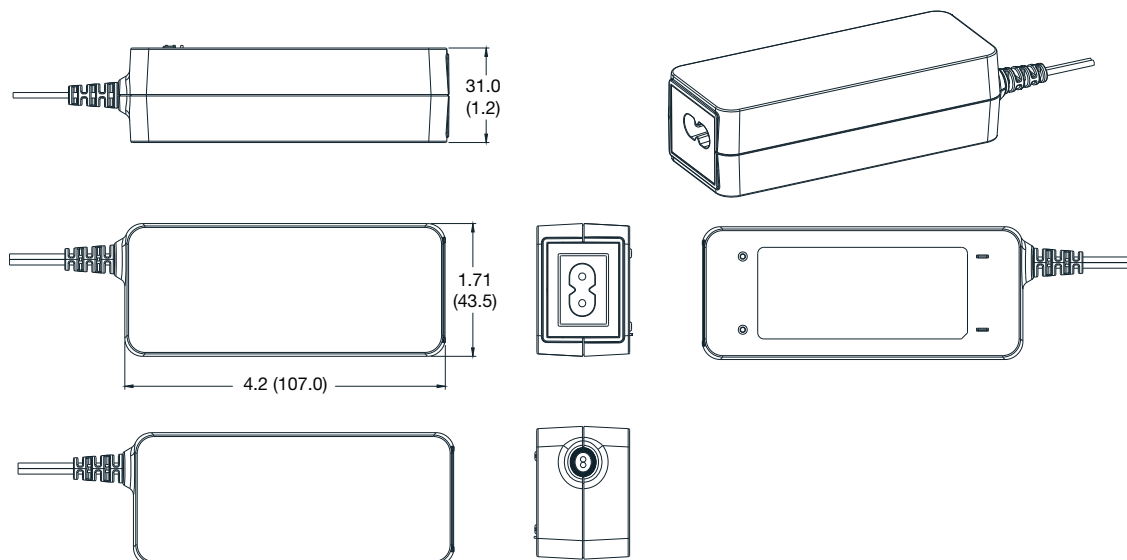
| Phenomenon             | Standard         | Test Level                               | Criteria | Notes & Conditions |
|------------------------|------------------|--|----------|--------------------|
| ESD Immunity           | EN61000-4-2      | ±4 kV contact, ±8 kV air                 | A        |                    |
| Radiated Immunity      | EN61000-4-3      | 3 V/m                                    | A        |                    |
| EFT/Burst              | EN61000-4-4      | Level 2                                  | A        |                    |
| Surge                  | EN61000-4-5      | Level 2                                  | A        |                    |
| Conducted Immunity     | EN61000-4-6      | 3 V                                      | A        |                    |
| Magnetic Fields        | EN61000-4-8      | 1 A/m                                    | A        |                    |
| Dips and Interruptions | EN55024 (115VAC) | 100% U <sub>T</sub> (0 VAC) for 10 ms    | A        |                    |
|                        |                  | 30% U <sub>T</sub> (80.5 VAC) for 500 ms | A        |                    |
|                        |                  | 100% U <sub>T</sub> (0 VAC) for 5000 ms  | B        |                    |
|                        | EN55024 (230VAC) | 100% U <sub>T</sub> (0 VAC) for 10 ms    | A        |                    |
|                        |                  | 30% U <sub>T</sub> (161 VAC) for 500 ms  | A        |                    |
|                        |                  | 100% U <sub>T</sub> (0 VAC) for 5000 ms  | B        |                    |

### Safety Approvals

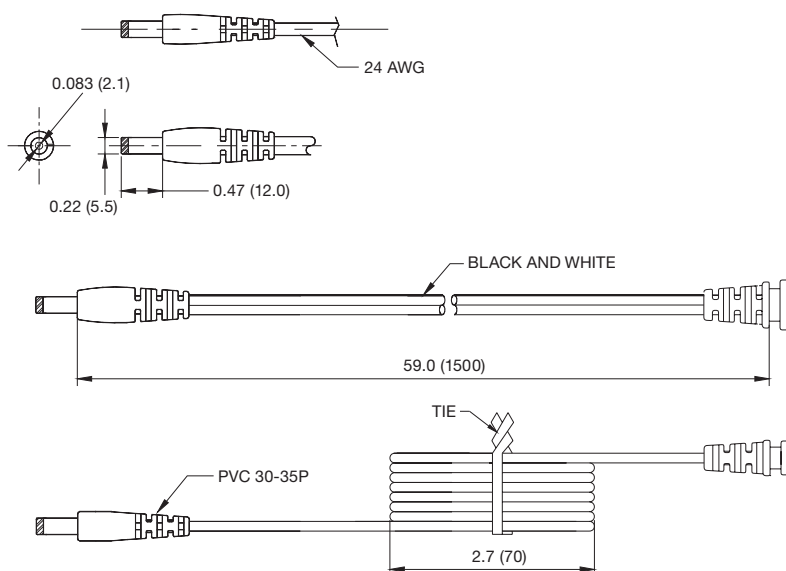
| Phenomenon | Standard  |
|------------|---|
| CB Report  | IEC60950-1  |
| UL         | UL/cUL60950-1, approved as limited power source (LPS) |
| TUV        | EN60950-1   |
| CCC        | China Compulsory Certification, GB4943                |
| AU/NZ      | AU/NZ 60950.1   |

### Mechanical Details

#### VET18USXXXC2-JA



### Output Lead and Connection



Wire type: VW-1 80°C 300 V L=1500 mm 2468, 22 AWG for 12 V output, 24 AWG for other outputs, 2C Black and White. Black - Negative, White - Positive

Polarity  $\ominus$   $\bullet$   $\oplus$