### 35W Single Output Switching Power Supply

**APV-35 series**

#### Features:
- Constant voltage mode power supply
- Universal AC input / Full range
- Withstand 300VAC Surge input for 5 seconds
- Protections: Short circuit / Over load / Over voltage
- Fully isolated plastic case
- Cooling by free air convection
- Small and compact size
- IP42 design
- Class 2 power unit
- Pass LPS
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty

#### SPECIFICATION

**OUTPUT**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DC VOLTAGE</th>
<th>RATED CURRENT</th>
<th>CURRENT RANGE</th>
<th>RATED POWER</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE TOLERANCE</th>
<th>LINE REGULATION</th>
<th>LOAD REGULATION</th>
<th>SETUP RISE TIME</th>
<th>VOLTAGE RANGE</th>
<th>FREQUENCY RANGE</th>
<th>EFFICIENCY (Typ.)</th>
<th>AC CURRENT</th>
<th>INRUSH CURRENT (Typ.)</th>
<th>MAX. No. of PSUs on 16A</th>
<th>LEAKAGE CURRENT</th>
<th>OVER LOAD</th>
<th>WORKING TEMPERATURE</th>
<th>ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>APV-35-5</td>
<td>5V</td>
<td>5A</td>
<td>0 ~ 5A</td>
<td>25W</td>
<td>120mVp-p</td>
<td>±5%</td>
<td>±1.0%</td>
<td>±2.0%</td>
<td>1500ms, 40ms / 230VAC</td>
<td>90 ~ 264VAC</td>
<td>47 ~ 63Hz</td>
<td>76.5%</td>
<td>0.5A/230VAC</td>
<td>COLD START 45A (width=440μs measured at 50% Ipeak) at 230VAC</td>
<td>6 units (circuit breaker of type B) / 10 units (circuit breaker of type C) at 230VAC</td>
<td>0.25mA / 240VAC</td>
<td>110% ~ 160% rated output power</td>
<td>-30 ~ 70°C (Refer to “Derating Curve”)</td>
<td>20 ~ 90% RH non-condensing</td>
</tr>
<tr>
<td>APV-35-12</td>
<td>12V</td>
<td>3A</td>
<td>0 ~ 3A</td>
<td>36W</td>
<td>150mVp-p</td>
<td>±5%</td>
<td>±1.0%</td>
<td>±2.0%</td>
<td>1500ms, 40ms / 115VAC</td>
<td>127 ~ 370VDC</td>
<td>127 ~ 370VDC</td>
<td>83%</td>
<td>0.75A/115VAC</td>
<td>COLD START 45A (width=440μs measured at 50% Ipeak) at 230VAC</td>
<td>6 units (circuit breaker of type B) / 10 units (circuit breaker of type C) at 230VAC</td>
<td>0.25mA / 240VAC</td>
<td>110% ~ 160% rated output power</td>
<td>-30 ~ 70°C (Refer to “Derating Curve”)</td>
<td>20 ~ 90% RH non-condensing</td>
</tr>
<tr>
<td>APV-35-15</td>
<td>15V</td>
<td>2.4A</td>
<td>0 ~ 2.4A</td>
<td>36W</td>
<td>150mVp-p</td>
<td>±5%</td>
<td>±1.0%</td>
<td>±2.0%</td>
<td>1500ms, 40ms / 115VAC</td>
<td>127 ~ 370VDC</td>
<td>127 ~ 370VDC</td>
<td>84%</td>
<td>1.5A/115VAC</td>
<td>COLD START 45A (width=440μs measured at 50% Ipeak) at 230VAC</td>
<td>6 units (circuit breaker of type B) / 10 units (circuit breaker of type C) at 230VAC</td>
<td>0.25mA / 240VAC</td>
<td>110% ~ 160% rated output power</td>
<td>-30 ~ 70°C (Refer to “Derating Curve”)</td>
<td>20 ~ 90% RH non-condensing</td>
</tr>
<tr>
<td>APV-35-24</td>
<td>24V</td>
<td>1.5A</td>
<td>0 ~ 1.5A</td>
<td>36W</td>
<td>180mVp-p</td>
<td>±5%</td>
<td>±1.0%</td>
<td>±2.0%</td>
<td>1500ms, 40ms / 115VAC</td>
<td>27 ~ 32.4V</td>
<td>47 ~ 63Hz</td>
<td>84%</td>
<td>1A/115VAC</td>
<td>COLD START 45A (width=440μs measured at 50% Ipeak) at 230VAC</td>
<td>6 units (circuit breaker of type B) / 10 units (circuit breaker of type C) at 230VAC</td>
<td>0.25mA / 240VAC</td>
<td>110% ~ 160% rated output power</td>
<td>-30 ~ 70°C (Refer to “Derating Curve”)</td>
<td>20 ~ 90% RH non-condensing</td>
</tr>
<tr>
<td>APV-35-36</td>
<td>36V</td>
<td>1A</td>
<td>0 ~ 1A</td>
<td>36W</td>
<td>180mVp-p</td>
<td>±5%</td>
<td>±1.0%</td>
<td>±2.0%</td>
<td>1500ms, 40ms / 115VAC</td>
<td>27 ~ 32.4V</td>
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</tbody>
</table>

**INPUT**

- AC CURRENT: 47 ~ 63Hz
- FREQUENCY RANGE: 90 ~ 264VAC
- EFFICIENCY (Typ.): 85%
- AC CURRENT: 0.5A / 230VAC
- INRUSH CURRENT (Typ.): COLD START 45A (width=440μs measured at 50% Ipeak) at 230VAC
- MAX. No. of PSUs on 16A CIRCUIT BREAKER: 6 units (circuit breaker of type B) / 10 units (circuit breaker of type C) at 230VAC
- LEAKAGE CURRENT: 0.25mA / 240VAC

**PROTECTION**

- OVER LOAD: 110% ~ 160% rated output power
- OVER VOLTAGE: Protection type: Hiccup mode, recovers automatically after fault condition is removed
- WORKING TEMPERATURE: -30 ~ 70°C (Refer to “Derating Curve”)
- WORKING HUMIDITY: 20 ~ 90% RH non-condensing
- STORAGE TEMP. HUMIDITY: -40 ~ +80°C, 10 ~ 95% RH
- TEMP. COEFFICIENT: ±0.03%/°C (0 ~ 50°C)
- VIBRATION: 10 ~ 500Hz, 2G 10min./cycle, period for 60min. each along X, Y, Z axes

**SAFETY & EMC**

- SAFETY STANDARDS: UL8750, CSA-C22.2 No. 250.0-13, IP42 approved; design refer to EN60950-1
- WITHSTAND VOLTAGE: IIP-OIP: 3KVAC
- ISOLATION RESISTANCE: IIP-OIP: >100M Ohms / 500VDC / 25°C / 70% RH
- EMC EMISSION: Compliance to EN55032, EN61000-3-2 Class A, EN61000-3-3
- EMC IMMUNITY: Compliance to EN55024, EN61000-4-2, 4, 5, 6, 8, 11; light industry level (surge 2KV), criteria A

**OTHERS**

- MTBF: 692.8K hrs min. MIL-HDBK-217F (25°C)
- DIMENSION: 84*57*29.5mm (L*W*H)
- PACKING: 0.18kgc, 72pcs / 14Kg / 0.92CUFT

**NOTE**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20kHz of bandwidth by using a 12” twisted pair wire terminated with a 0.1uf / 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-quality EMC Directive on the complete installation again.
6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
7. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit.
35W Single Output Switching Power Supply

APV-35 series

Mechanical Specification

- Case No.: PCD16A
- Unit: mm

Block Diagram

- Input Voltage (VAC) 60Hz: 90, 100, 200, 220, 210, 230, 250, 240, 264

Derating Curve

- Load (%)
- Ambient Temperature (°C)

Static Characteristics

- Load (%)
- Input Voltage (VAC) 60Hz

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