



SELV  IP42   

■ Features

- Constant voltage design
- Protections: Short circuit / Over load / Over voltage
- Fully isolated plastic case
- Cooling by free air convection
- Small and compact size
- Class II power unit, no FG
- No load power consumption <0.5W
- IP42 design
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

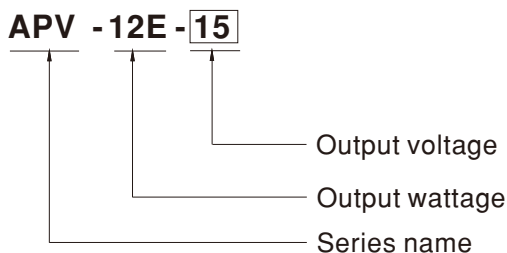
■ Applications

- Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)(Note.8)

■ Description

APV-12E series is one 12W AC/DC constant voltage mode single output LED power supply. It accepts input 180~264VAC and provides four models with different output voltage, 5V, 12V, 15V,24V, respectively, that the small wattage LED applications employ the most frequently. Exploiting Class II design (without FG pin) and adopting the 94V-0 flame retardant plastic enclosure, APV-12E ideally fits the entry-level LED applications.

■ Model Encoding



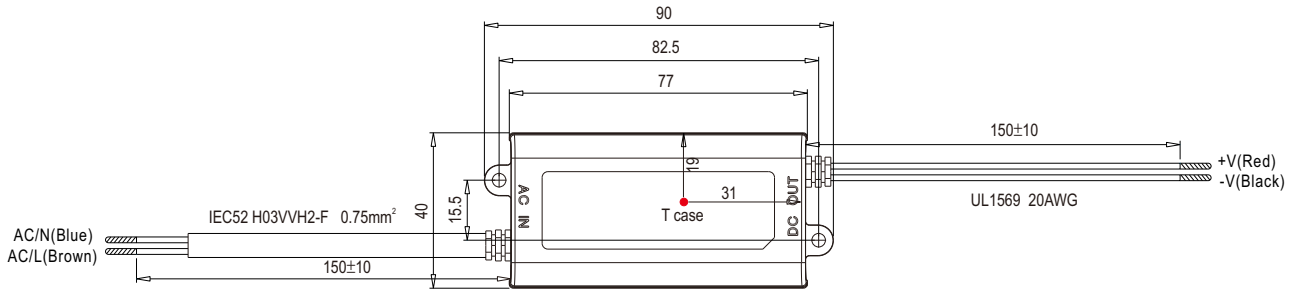


SPECIFICATION

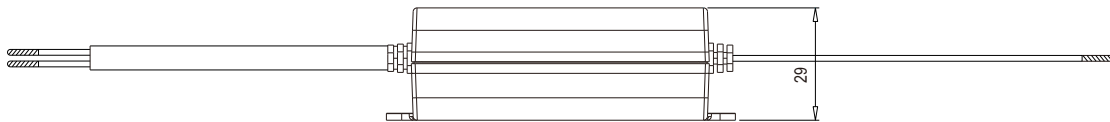
| MODEL | APV-12E-5 | APV-12E-12 | APV-12E-15 | APV-12E-24 | |
|--------------|---|---|--------------|------------|--------------|
| OUTPUT | DC VOLTAGE | 5V | 12V | 15V | 24V |
| | RATED CURRENT | 2A | 1A | 0.8A | 0.5A |
| | CURRENT RANGE | 0 ~ 2A | 0 ~ 1A | 0 ~ 0.8A | 0 ~ 0.5A |
| | RATED POWER | 10W | 12W | 12W | 12W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 120mVp-p | 150mVp-p |
| | VOLTAGE TOLERANCE Note.3 | ±5.0% | | | |
| | LINE REGULATION | ±1.0% | | | |
| | LOAD REGULATION | ±2.0% | | | |
| | SETUP, RISE TIME Note.6 | 500ms, 30ms / 230VAC at full load | | | |
| | HOLD UP TIME (Typ.) | 20ms/230VAC at full load | | | |
| INPUT | VOLTAGE RANGE Note.4 | 180 ~ 264VAC | 254 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | |
| | POWER FACTOR (Typ.) | PF>0.5/230VAC at full load | | | |
| | EFFICIENCY (Typ.) | 75% | 81% | 81% | 83% |
| | AC CURRENT | 0.2A/230VAC | | | |
| | INRUSH CURRENT(Typ.) | COLD START 70A(twidth=120µs measured at 50% Ipeak) at 230VAC | | | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 17 units (circuit breaker of type B) / 29 units (circuit breaker of type C) at 230VAC | | | |
| | LEAKAGE CURRENT | 0.25mA / 240VAC | | | |
| PROTECTION | OVER LOAD | Above 105% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 5.75 ~ 6.75V | 13.8 ~ 16V | 17.5 ~ 21V | 27.6 ~ 32.4V |
| ENVIRONMENT | WORKING TEMP. | -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./1cycle, period for 60min. each along X, Y, Z axes | | | |
| SAFETY & EMC | SAFETY STANDARDS | EAC TP TC 004, IP42 approved;design refer to BS EN/EN 62368-1 | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | | | |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032,BS EN/EN61000-3-2,BS EN/EN61000-3-3, EAC TP TC 020 | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN55024,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), criteria A, EAC TP TC 020 | | | |
| OTHERS | MTBF | 1145.7K hrs min. MIL-HDBK-217F (25°C) | | | |
| | DIMENSION | 77*40*29(L*W*H) | | | |
| | PACKING | 0.08Kg; 120pcs/11.8Kg/1.06CUFT | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltage. Please check the static characteristics for more details.</p> <p>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-qualify EMC Directive on the complete installation again.</p> <p>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.</p> <p>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>8. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF/XLG series are recommended.)</p> <p>9. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | |

Mechanical Specification

Unit:mm

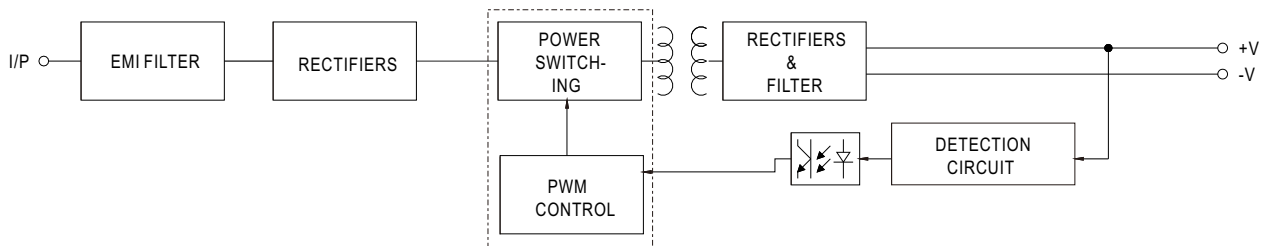


※ T case: Max. Case Temperature

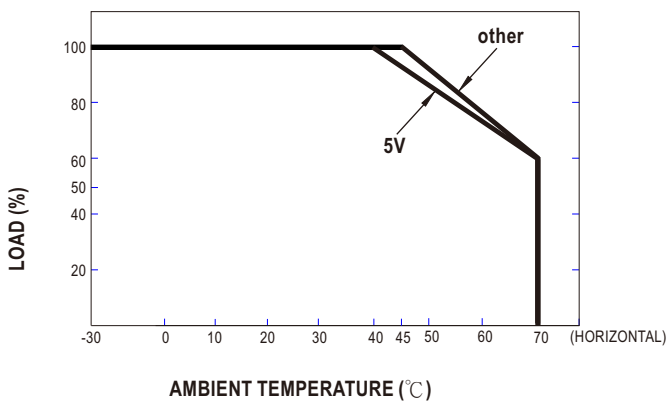


Block Diagram

fosc : 67KHz



Derating Curve



Static Characteristics

