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MEAN WELL

# 12W Single Output Switching Power Supply APV-12 series

## Features :

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

## SPECIFICATION

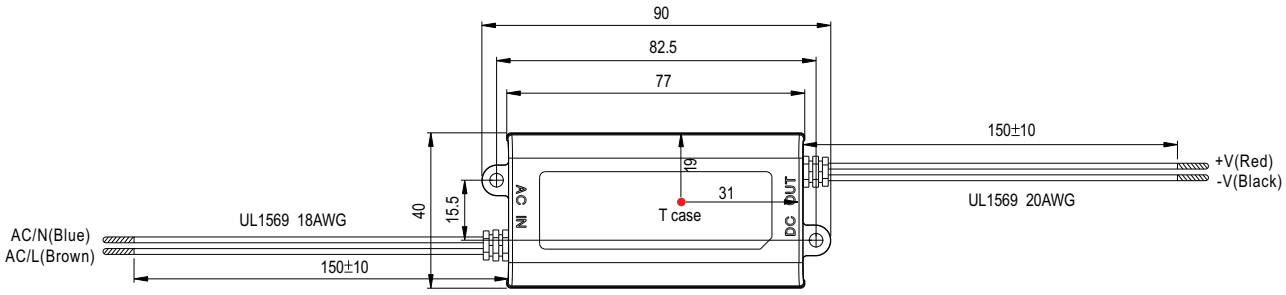
| MODEL | | APV-12-5 | APV-12-12 | APV-12-15 | APV-12-24 |
|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 5V | 12V | 15V | 24V |
| | RATED CURRENT | 2A | 1A | 0.8A | 0.5A |
| | CURRENT RANGE | 0 ~ 2A | 0 ~ 1A | 0 ~ 0.8A | 0 ~ 0.5A |
| | RATED POWER | 10W | 12W | 12W | 12W |
| | RIPPLE & NOISE (max.) 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 | 1500ms, 30ms / 230VAC | 1500ms,30ms / 115VAC at full load | | |
| | HOLD UP TIME (Typ.) | 20ms/230VAC | 15ms/115VAC at full load | | |
| INPUT | VOLTAGE RANGE Note.4 | 90 ~ 264VAC | 127 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | |
| | EFFICIENCY (Typ.) | 76% | 82% | 82% | 84% |
| | AC CURRENT | 0.2A/230VAC | 0.35A/115VAC | | |
| | INRUSH CURRENT(max.) | COLD START 35A/115VAC | 70A/230VAC | | |
| | LEAKAGE CURRENT | 0.25mA / 240VAC | | | |
| PROTECTION | OVER CURRENT | 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 |
| | | Protection type : Shut off o/p voltage, clamping by zener diode | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70℃ (Refer to "Derating Curve") | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80℃, 10 ~ 95% RH | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | |
| SAFETY & EMC | SAFETY STANDARDS | Design refer to TUV EN60950-1, EN61347-2-13,UL8750 | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | | | |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms / 500VDC / 25℃/ 70% RH | | | |
| | EMC EMISSION | Compliance to EN55015,EN61000-3-2 Class A,EN61000-3-3 | | | |
| | EMC IMMUNITY | Compliance to EN61547,EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), criteria A | | | |
| OTHERS | MTBF | 1145.7K hrs min. MIL-HDBK-217F (25 ) | | | |
| | DIMENSION | 77*40*29(L*W*H) | | | |
| | PACKING | 0.08Kg; 120pcs/11.8Kg/0.93CUFT | | | |

NOTE

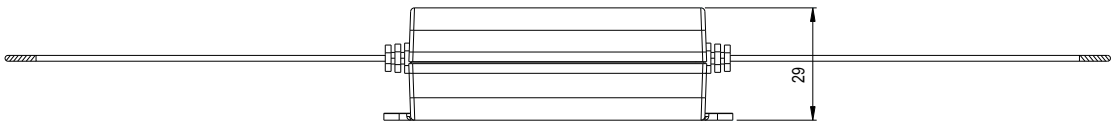
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation 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-qualify 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.

## ■ Mechanical Specification

Unit:mm

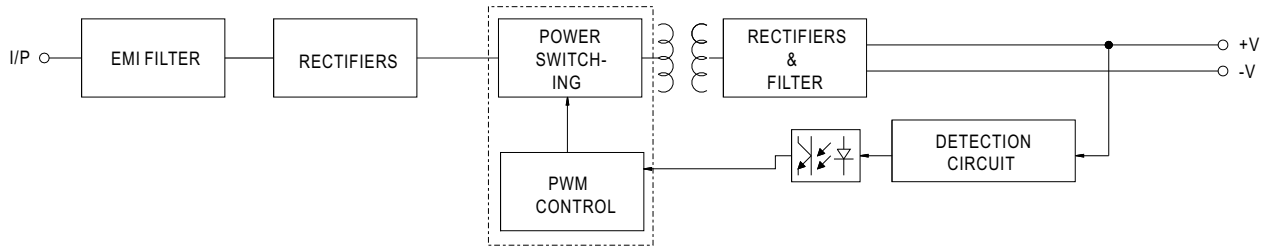



※ T case: Max. Case Temperature

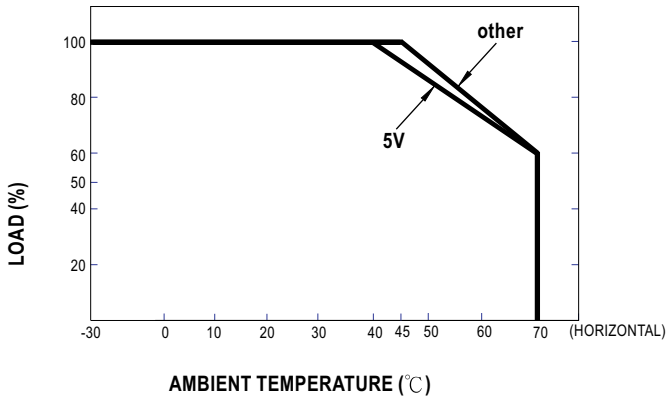



## ■ Block Diagram

fosc : 67KHz

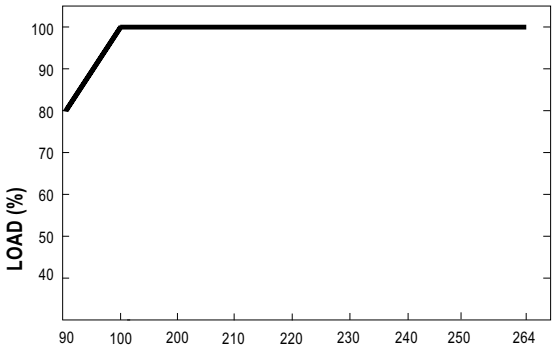



## ■ Derating Curve




AMBIENT TEMPERATURE (℃)

## ■ Static Characteristics




INPUT VOLTAGE (VAC) 60Hz