12W Single Output Switching Power Supply

APV-12 series

■ Features :

- Constant voltage design
- Universal AC input / Full range
- 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
- Class 2 power unit
- Pass LPS
- IP42 design
- Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

SPECIFICATION

110 SELV LPS IP42 IS 15885(Part 2/Sec13) R-41027766 (except for 15V) CB (optional)

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(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
		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 Note.8	UL8750,CSA C22.2 No.250.0-08, ENEC EN61347-1,EN61347-2-13,EN62384 Independent,BIS IS15885(except for 15V), EAC TP TC 004,IP42 approved			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC			
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25℃/ 70% RH			
	EMC EMISSION	Compliance to EN55032,EN61000-3-2 Class A,EN61000-3-3, EAC TP TC 020			
	EMC IMMUNITY	Compliance to EN55024,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℃)			
	DIMENSION	77*40*29(L*W*H)			
	PACKING	0.08Kg; 120pcs/11.8Kg/1.06CUFT			

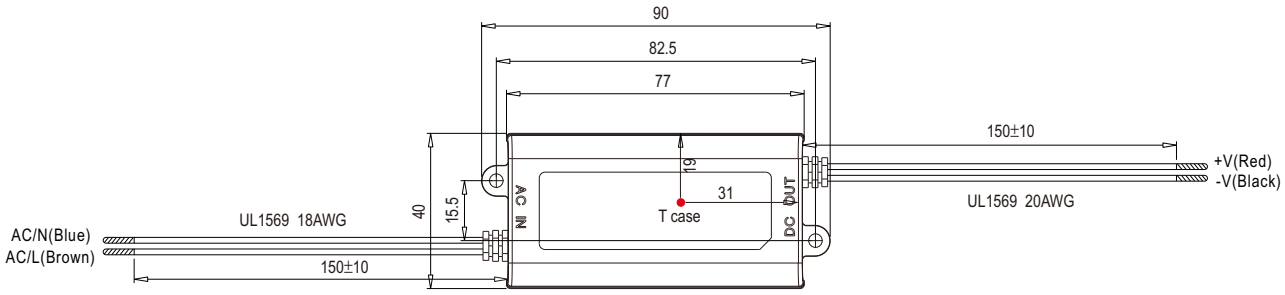
NOTE

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.
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.
8. The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional model . Please contact MEAN WELL for details.
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. Products sourced from the Americas regions may not have the ENEC/BIS/CCC logo. Please contact your MEAN WELL sales for more information.
11. 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

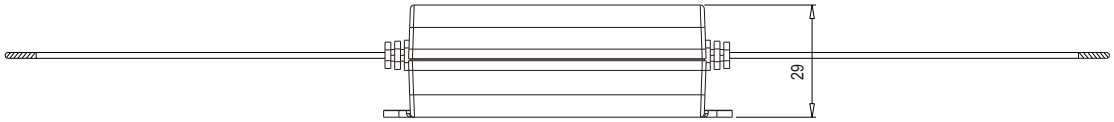
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Mechanical Specification

Unit:mm

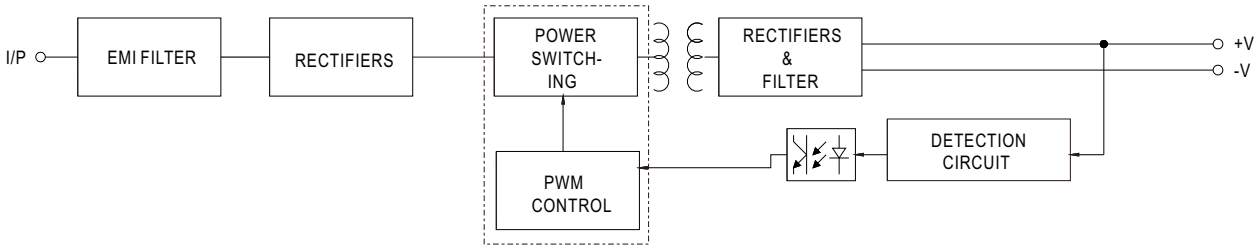


※ T case: Max. Case Temperature

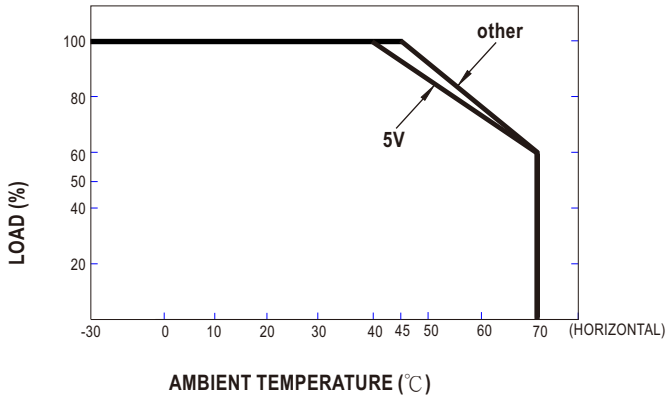
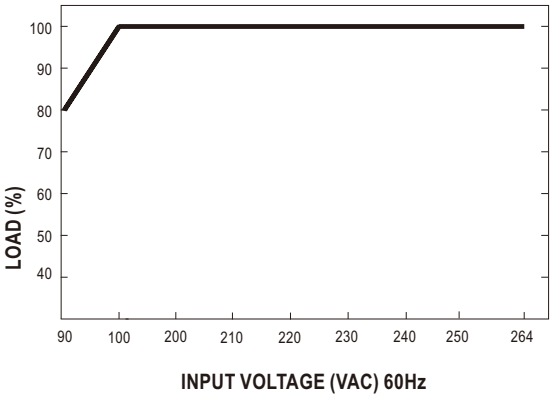


■ Block Diagram

fosc : 67KHz



■ Derating Curve



■ Static Characteristics