MW APV-16E series 16W Single Output Switching Power Supply Instruction Manual

Contents

MW APV-16E series 16W Single Output Switching Power Supply

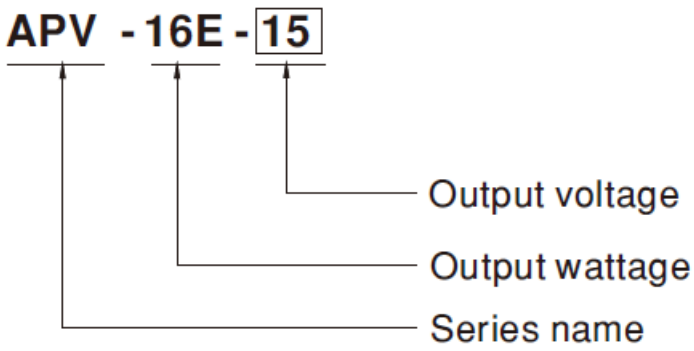
Features

- Constant current design
- Protections:Short circuit/ Over voltage
- Fully isolated plastic case
- Small and compact size
- Cooling by free air convection
- 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

Description

APV-16E series is one 16W AC/DC constant voltage mode single output LED power supply. It accepts input 180264VAC 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-16E ideally fits the entry-level LED applications.

Model Encoding



Applications

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

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

12W Single Output Switching Power Supply

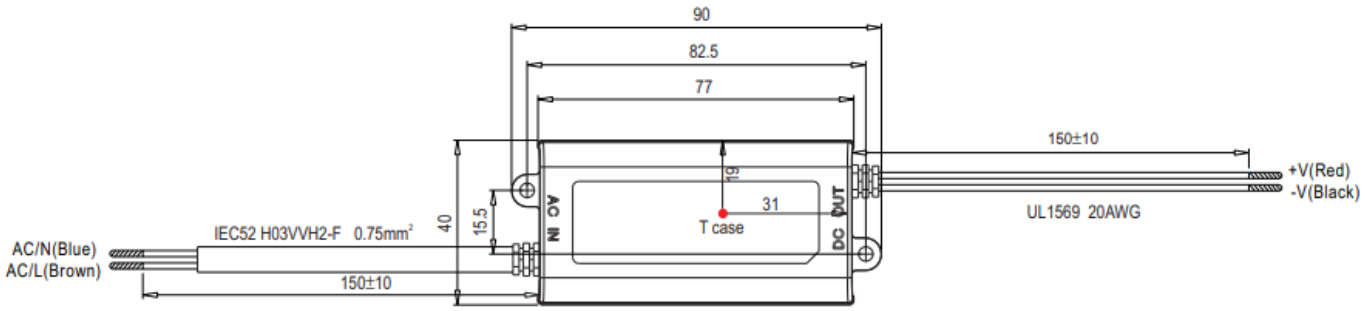
SPECIFICATION

MODEL		APV-16E-5	APV-16E-12	APV-16E-15	APV-16E-24
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	2.6A	1.25A	1A	0.67A
	CURRENT RANGE	0 ~ 2.6A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.67A
	RATED POWER	13W	15W	15W	16.08W
	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%	79%	80%	82%
	AC CURRENT	0.3A/230VAC			
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=185μs measured at 50% Ipeak) at 230VAC			
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	13 units (circuit breaker of type B) / 22 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			

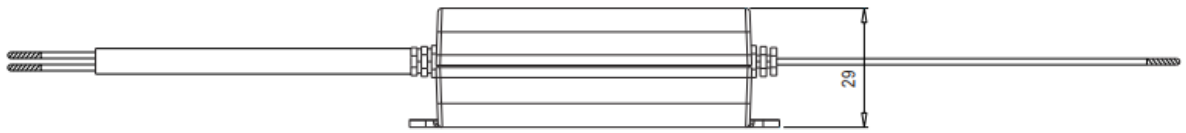
ENVIRONMENT	**WORKING TEMP.**	-30 ~ +70℃(Refer to “Derating Curve”)
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	**SAFETY STANDARDS**	EAC TP TC 004, IP42 , BS EN/EN 62368-1 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 BS EN/EN55032,BS EN/EN61000-3-2,BS EN/EN61000-3-3, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN55035,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), EAC TP TC 020
OTHERS	**MTBF**	6876.1K hrs min. Telcordia SR-332 (Bellcore) ; 1055.5K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	77*40*29mm (L*W*H)
	PACKING	0.1Kg; 120pcs/14Kg/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 ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). 8. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF/XLG series are recommended.) 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** ※ Product Liability Disclaimer For detailed information, please refer to https://**www.meanwell.com/serviceDisclaimer.aspx**

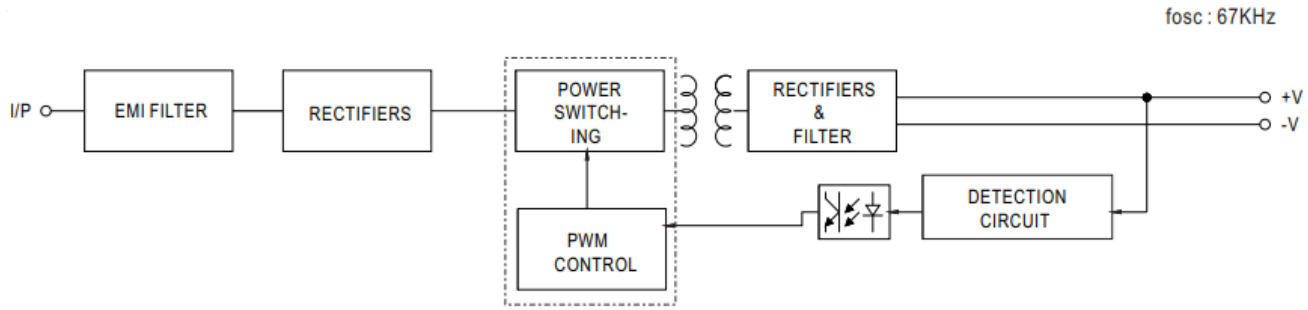
Mechanical Specification



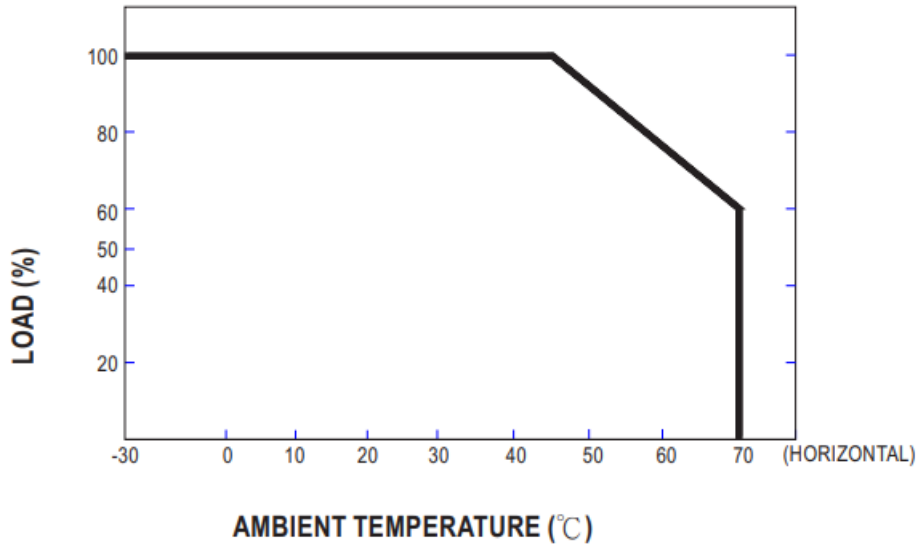
※ T case: Max. Case Temperature



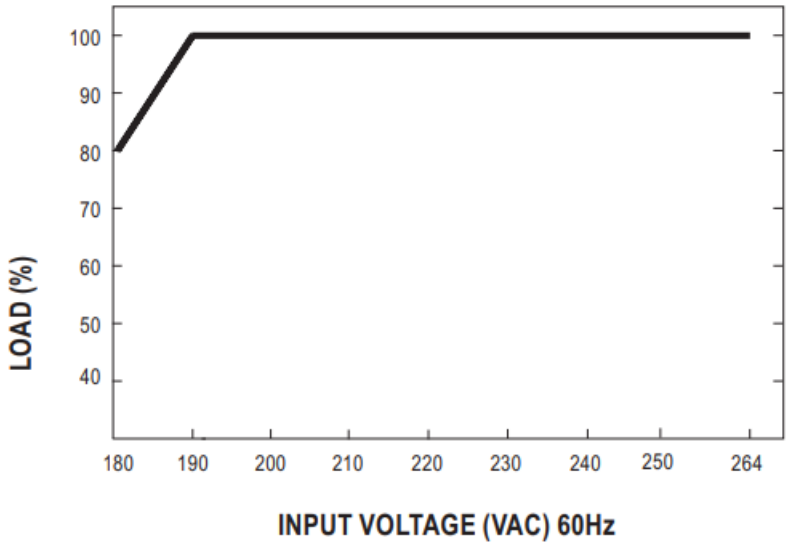
Block Diagram



Derating Curve



Static Characteristics



Documents / Resources

	**MW APV-16E series 16W Single Output Switching Power Supply** [pdf] Instruction Manual APV-16E series, 16W Single Output Switching Power Supply, APV-16E series 16W Single Output Switching Power Supply, Output Switching Power Supply, Power Supply

References

- **Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer**