



16W Single Output Switching Power Supply

APV-16E series

User's Manual



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

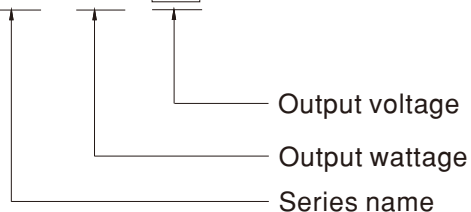
■ Applications

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

■ Description

APV-16E series is one 16W 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-16E ideally fits the entry-level LED applications.

■ Model Encoding

APV - 16E - 15



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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.) <small>Note.2</small>	100mVp-p		120mVp-p		120mVp-p		150mVp-p	
	VOLTAGE TOLERANCE <small>Note.3</small>	±5.0%							
	LINE REGULATION	±1.0%							
	LOAD REGULATION	±2.0%							
	SETUP, RISE TIME <small>Note.6</small>	500ms, 30ms / 230VAC at full load							
HOLD UP TIME (Typ.)	20ms/230VAC at full load								
INPUT	VOLTAGE RANGE <small>Note.4</small>	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 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℃ / 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℃)							
	DIMENSION	77*40*29mm (L*W*H)							
	PACKING	0.1Kg; 120pcs/14Kg/1.06CUFT							
NOTE	<div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Derating may be needed under low input voltage. Please check the static characteristics for more details.</div> <div>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.</div> <div>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.</div> <div>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).</div> <div>8. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF/XLG series are recommended.)</div> <div>9. For any application note and IP water proof function installation caution, please refer our user manual before using.</div> <div>https://www.meanwell.com/Upload/PDF/LED_EN.pdf</div> <div>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</div>								

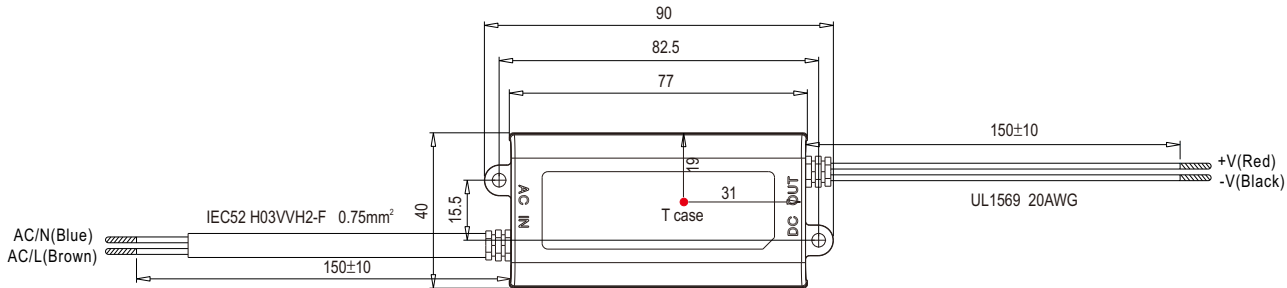


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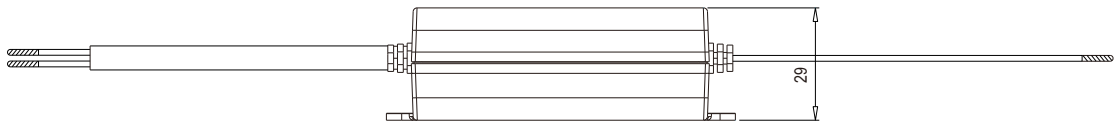
APV-16E series

■ Mechanical Specification

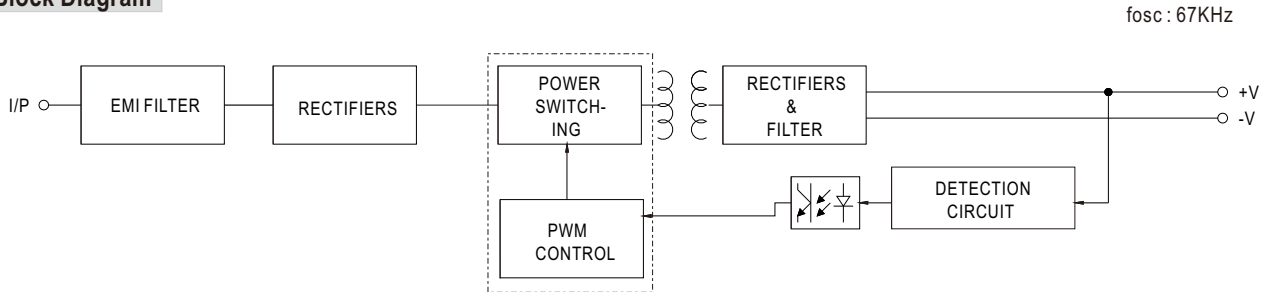
Unit:mm



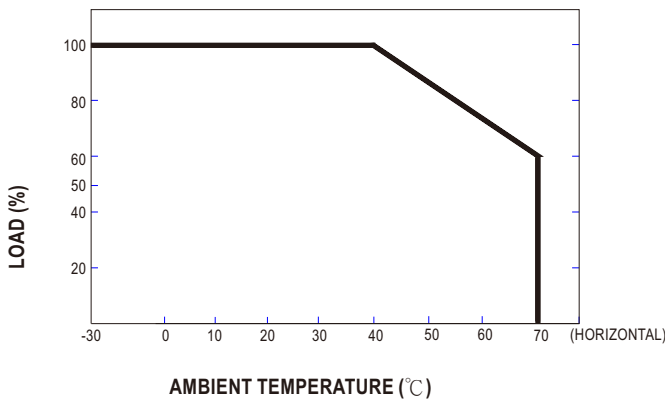
※ T case: Max. Case Temperature



■ Block Diagram



■ Derating Curve



■ Static Characteristics

