MEAN WELL

12W Single Output Switching Power Supply

APC-12E series

User's Manual
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SELV IP42 CE UKCA

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

Applications

- Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)(Note.7)

GTIN CODE

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

Description

APC-12E series is one 12W AC/DC constant current mode single output LED power supply. It accepts input 180~264VAC and provides two models with different output current, 350mA and 700mA, 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, APC-12E ideally fits the entry-level LED applications.

Model Encoding

APC - 12E - 700

- 700 — Output current
- 12E — Output wattage
- APC — Series name

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12W Single Output Switching Power Supply

APC-12E series

SPECIFICATION

MODEL		APC-12E-350	APC-12E-700
OUTPUT	RATED CURRENT	350mA	700mA
	DC VOLTAGE RANGE	9~36V	9~18V
	RATED POWER	12.6W	12.6W
	RIPPLE & NOISE (max.)Note.2	300mVp-p	250mVp-p
	VOLTAGE TOLERANCE Note.3	±5.0%	
	CURRENT ACCURACY	±8.0%	
	LINE REGULATION	±1.0%	
	LOAD REGULATION	±3.0%	
	SETUP, RISE TIME	500ms, 180ms / 230VAC	
	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.)	81%	79%
	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 VOLTAGE	39.6~ 46.8V	20.7~ 24.3V
		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	±0.2%/℃ (0 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 5)	SAFETY STANDARDS	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	
	EMC IMMUNITY	Compliance to BS EN/EN55035,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV)	
OTHERS	MTBF	6112.3K hrs min. Telcordia SR-332 (Bellcore) ; 1013.6K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	77*40*29(L*W*H)	
	PACKING	0.08Kg; 120pcs/11.8Kg/1.06CUFT	

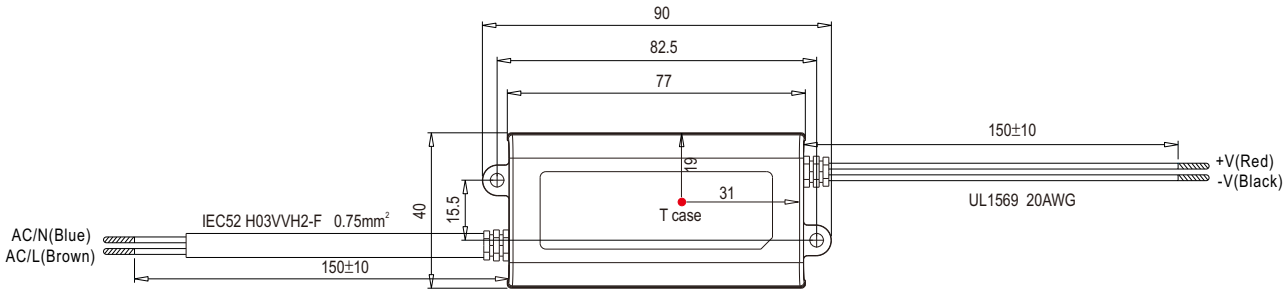
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 characteristic 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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).
7. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF/XLG series are recommended.)
8. 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

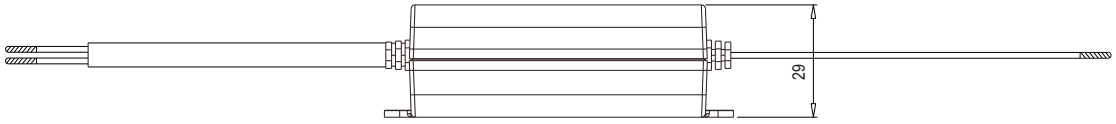
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Mechanical Specification

Unit:mm Tolerance:±1

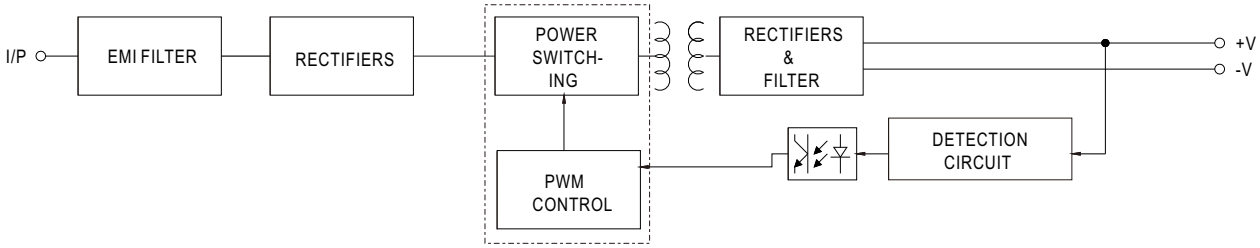


※ T case: Max. Case Temperature

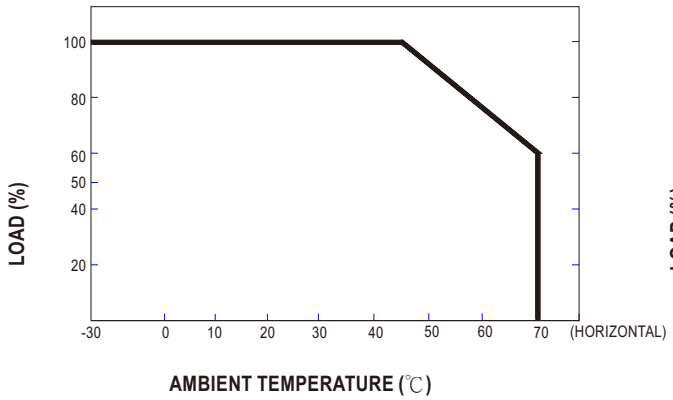


■ Block Diagram

fosc : 67KHz

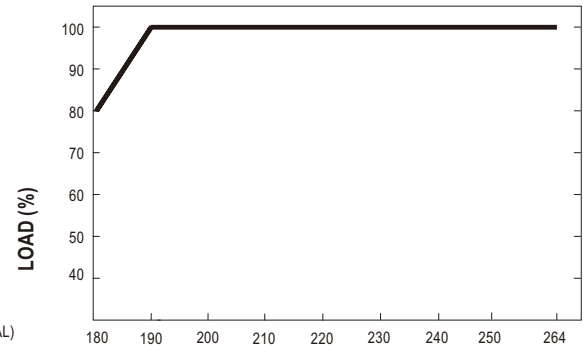


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Static Characteristics



INPUT VOLTAGE (VAC) 60Hz