8W Single Output Switching Power Supply

APC-8 series



IP42

Features

- Constant current design
- Universal AC input / Full range
- Class Ⅱ power unit, no FG
- Fully isolated plastic case
- IP42 design
- Small and compact size
- Cooling by free air convection
- Protection:Short circuit
- No load power consumption <0.5W
- 100% full load burn-in test
- Low cost / High reliability
- 2 years warranty

Applications

- Indoor LED lighting
- LED decorative lighting
- LED office lighting

Description

APC-8 series is one 8W AC/DC constant current mode single output LED power supply. It accepts the full range input 90~264VAC and provides four models with different output current, 250mA, 350mA, 500mA 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-8 ideally fits the entry-level LED applications.

Model Encoding

APC - 8 - 350

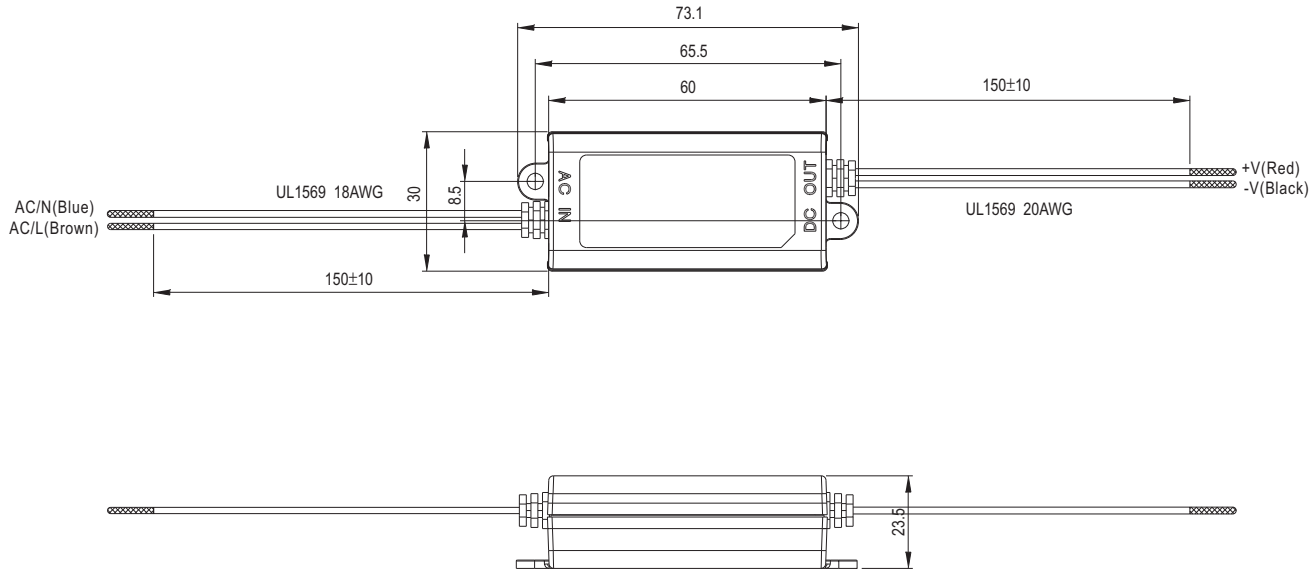
- 350 — Output current
- 8 — Output wattage
- APC — Series name

SPECIFICATION

MODEL		APC-8-250	APC-8-350	APC-8-500	APC-8-700
OUTPUT	RATED CURRENT	250mA	350mA	500mA	700mA
	OPERATING VOLTAGE RANGE Note.4	16~32V	11~23V	8~16V	6~11V
	RATED POWER	8W	8.05W	8W	7.7W
	RIPPLE & NOISE (max.) Note.2	350mVp-p	300mVp-p	300mVp-p	250mVp-p
	NO LOAD OUTPUT VOLTAGE(max.)	38V	29V	24V	17V
	CURRENT ACCURACY	±8.0%			
	SETUP, RISE TIME	500ms, 180ms / 230VAC 3000ms, 150ms / 115VAC at full load			
	HOLD UP TIME (Typ.)	20ms/230VAC at full load			
INPUT	VOLTAGE RANGE Note.3	90 ~ 264VAC 127 ~ 370VDC (Note.5)			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	82.5%	81.5%	81%	80%
	AC CURRENT	0.15A/230VAC;0.3A/115VAC			
	INRUSH CURRENT(Typ.)	COLD START 70A(twidth=120μs measured at 50% Ipeak) at 230VAC			
	LEAKAGE CURRENT	0.25mA / 240VAC			
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.			
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 ~45℃)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL8750,CSA C22.2 No.250.0-08 approved; design refer to EN60950-1,EN61347-1,EN61347-2-13			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC			
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25℃/ 70% RH			
	EMC EMISSION	Compliance to EN55022,EN61000-3-2 Class A,EN61000-3-3			
	EMC IMMUNITY	Compliance to EN55024,EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), criteria A			
OTHERS	MTBF	2275.8K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	60*30*23.5mm(L*W*H)			
	PACKING	0.09Kg;144pcs/14Kg/0.75CUFT			
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. Derating may be needed under low input voltage, please check the static characteristic for more details. 4. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design. 5. When applying DC voltage for input, please connect the brown input wire to the positive side whereas blue input wire to the negative side. 6. 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.				

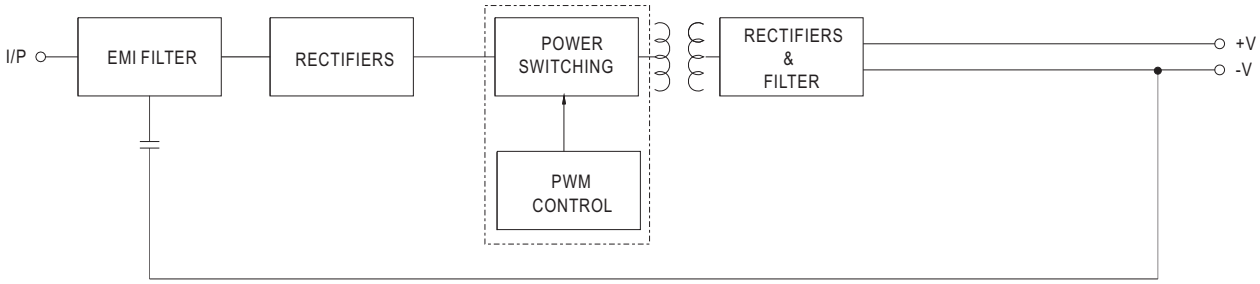
■ Mechanical Specification

Unit:mm

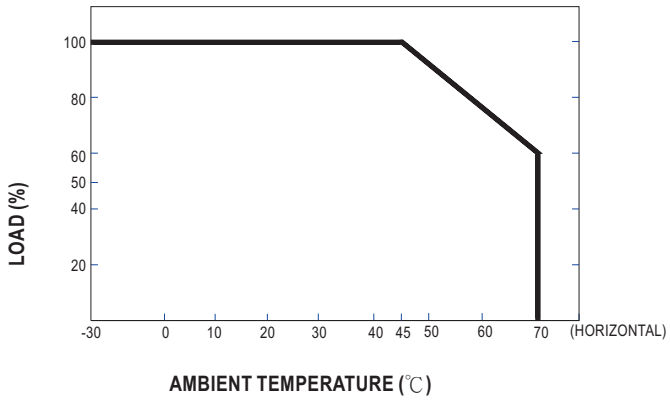


■ Block Diagram

fosc : 67KHz

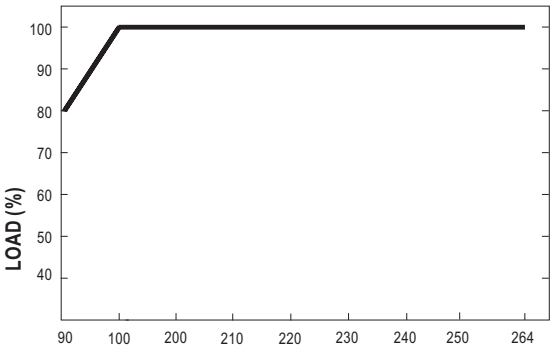


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Static Characteristics



INPUT VOLTAGE (VAC) 60Hz