

KEY FEATURES

- Switching Power Modules for PCB Mounting
- Fully Encapsulated Plastic Case
- Universal Input Range 90-260VAC, 47-440 Hz
- Regulated Output
- Low Ripple and Noise
- High Efficiency
- CE, cUL, TUV Approvals
- 2-Year Product Warranty


ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	APC-3.3S	APC-5S	APC-12S	APC15S	APC24S	
Max output wattage (W)	5W	5W	5W	5W	5W	
Input	Voltage					
	90-260 VAC or 120-370 VDC					
	Frequency (Hz)					
	47-440 Hz					
	Current (Full load)					
	110 mA max. (115 VAC) / 70 mA max. (230 VAC)					
Output	Inrush current (<2ms)					
	10 A max. (115 VAC) / 20 A max. (230 VAC)					
	Leakage Current					
	0.75 mA max.					
	External fuse (recommend)					
	1.5 A slow blow type					
Output	Voltage (V.DC.)	3.3V	5V	12V	15V	24V
	Voltage accuracy	±2%	±2%	±2%	±2%	±2%
	Current (mA) max	1500	1000	416	333	200
	Line regulation (typ.)	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%
	Load regulation (5-100%) (typ.)	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Minimum load	4%	1%	1%	0%	0%
	Maximum capacitive load	470-23,000µF depending on model				
	Ripple & Noise	<0.5% Vout +50mV max (Vp-p)				
	Efficiency	68%	72%	75%	75%	76%
	Hold-up time	15 ms min.				
	Switching frequency	100 kHz	100 kHz	100 kHz	100 kHz	100 kHz
Protection	Over current protection	Hiccup technique, auto-recovery				
	Over voltage protection	Zener diode clamp				
	Short circuit protection	Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (V.AC)	3000V	3000V	3000V	3000V	3000V
	Input-FG (V.AC)	1500V	1500V	1500V	1500V	1500V
	Output-FG (V.AC)	500V	500V	500V	500V	500V
Environment	Operating temperature	-25°C...+71°C				
	Storage temperature	-40°C...+85°C				
	Temperature coefficient	0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C
	Humidity	95% RH				
	MTBF	>300,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.17 x 1.77 x 0.81 Inches (55.0 x 45.0 x 20.5 mm)				
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)				
	Weight	80 g				
	Cooling method	Free air convection				
Safety	Agency approvals	UL/cUL, CE, TUV				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B				
	EMS (Noise Immunity)	EN 50082-1				

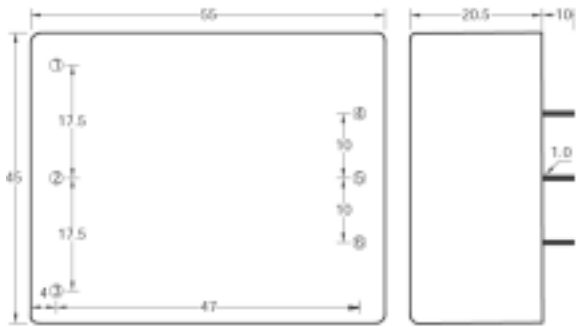
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

ELECTRICAL SPECIFICATIONS

Model No. (Dual Output)	APC-5D	APC-12D	APC-15D	
Max output wattage (W)	5W	5W	5W	
Input	Voltage	90-260 VAC or 120-370 VDC		
	Frequency (Hz)	47-440 Hz		
	Current (Full load)	110 mA max. (115 VAC) / 70 mA max. (230 VAC)		
	Inrush current (<2ms)	10 A max. (115 VAC) / 20 A max. (230 VAC)		
	Leakage Current	0.75 mA max.		
	External fuse (recommend)	1.5 A slow blow type		
Output	Voltage (V.DC.)	±5V	±12V	±15V
	Voltage accuracy	±2%	±2%	±2%
	Current (mA) max	±500	±200	±160
	Line regulation (typ.)	±0.3%	±0.3%	±0.3%
	Load regulation (5-100%) (typ.)	±0.5%	±0.5%	±0.5%
	Minimum load	0%	0%	3%
	Maximum capacitive load	470-23,000µF depending on model		
	Ripple & Noise	<0.5% Vout +50mV max (Vp-p)		
	Efficiency	72%	75%	75%
	Hold-up time	15 ms min.		
	Switching frequency	100 kHz	100 kHz	100 kHz
Protection	Over current protection	Hiccup technique, auto-recovery		
	Over voltage protection	Zener diode clamp		
	Short circuit protection	Hiccup mode, indefinite (automatic recovery)		
Isolation	Input-Output (V.AC)	3000V	3000V	3000V
	Input-FG (V.AC)	1500V	1500V	1500V
	Output-FG (V.AC)	500V	500V	500V
Environment	Operating temperature	-25°C...+71°C		
	Storage temperature	-40°C...+85°C		
	Temperature coefficient	0.02%/°C	0.02%/°C	0.02%/°C
	Humidity	95% RH		
	MTBF	>750,000 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimension (L x W x H)	2.17 x 1.77 x 0.81 Inches (55.0 x 45.0 x 20.5 mm)		
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)		
	Weight	80 g		
	Cooling method	Free air convection		
Safety	Agency approvals	UL/cUL, CE, TUV		
EMC	EMI (Conducted Emission)	EN 55022 class B		
	EMS (Radiated Emission)	EN 50082-1		

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

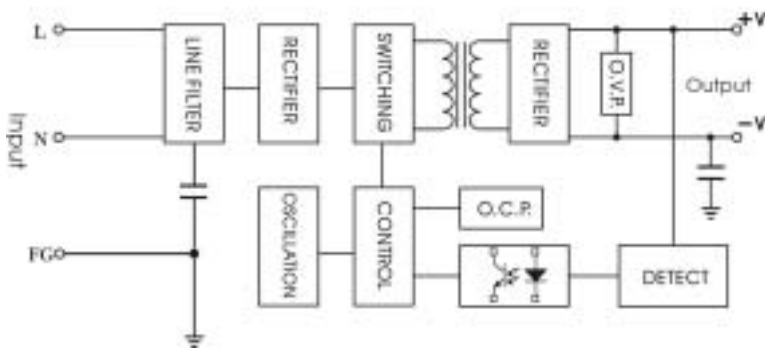
MECHANICAL DIMENSION (Top View)



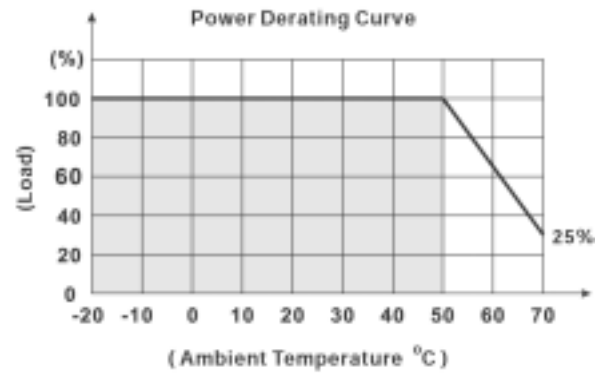
PIN#	SINGLE	Dual
1	FG	FG
2	AC IN	AC IN
3	AC IN	AC IN
4	-DC OUT	-DC OUT
5	DO NOT CONNECT	COMMON
6	+DC OUT	+DC OUT

BLOCK DIAGRAM

Single Output



DERATING



Dual Output

