

### KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 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				
	90-264 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.)				
	3.3V	5V	12V	15V	24V
	Voltage Accuracy				
	±2%				
	Current (mA) max				
	1500	1000	416	333	200
	Line Regulation (LL-HL) (typ.)				
	±0.3%				
	Load Regulation (5-100%) (typ.)				
	±0.5%.				
	Minimum Load				
4%	1%	1%	0%	0%	
Maximum Capacitive Load					
470-23,000µF depending on model					
Ripple					
<0.2% Vout +40mV max (Vp-p)					
Noise					
<0.5% Vout +50mV max (Vp-p)					
Efficiency					
62%	65%	70%	70%	71%	
Hold-up Time					
15 ms min.					
Switching Frequency					
100 kHz					
Protection	Over Power 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				
	Input-FG (V.AC)				
1500V					
Output-FG (V.AC)					
500V					
Environment	Operating Temperature				
	-25°C...+70°C (with derating)				
	Storage Temperature				
	-40°C...+85°C				
	Temperature Coefficient				
±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 ) Tolerance ±0.5 mm				
	Case Material				
	Plastic resin with 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					

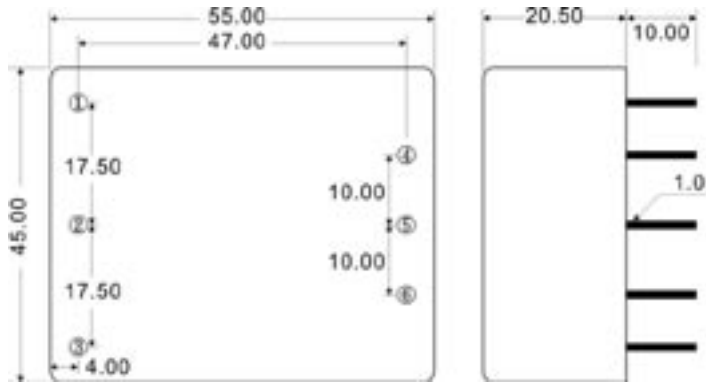
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

### ELECTRICAL SPECIFICATIONS

Model No. (Dual Output)	APC-5D	APC-12D	APC15D
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.)		±12V
	Voltage Accuracy		±2%
	Current (mA) max		±200
	Line Regulation (LL-HL) (typ.)		±0.3%
	Load Regulation (5-100%) (typ.)		±0.5%
	Minimum Load		0%
	Maximum Capacitive Load		470-23,000µF depending on model
	Ripple		<0.2% Vout +40mV max (Vp-p)
	Noise		<0.5% Vout +50mV max (Vp-p)
	Efficiency		70%
	Hold-up Time		15 ms min.
	Switching Frequency		100 kHz
	Protection	Over Power 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		
	Input-FG (V.AC)		
1500V			
Output-FG (V.AC)			
500V			
Environment	Operating Temperature		
	-25°C...+70°C (with derating)		
	Storage Temperature		
	-40°C...+85°C		
	Temperature Coefficient		
±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 ) Tolerance ±0.5 mm		
	Case Material		
	Plastic resin with 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			

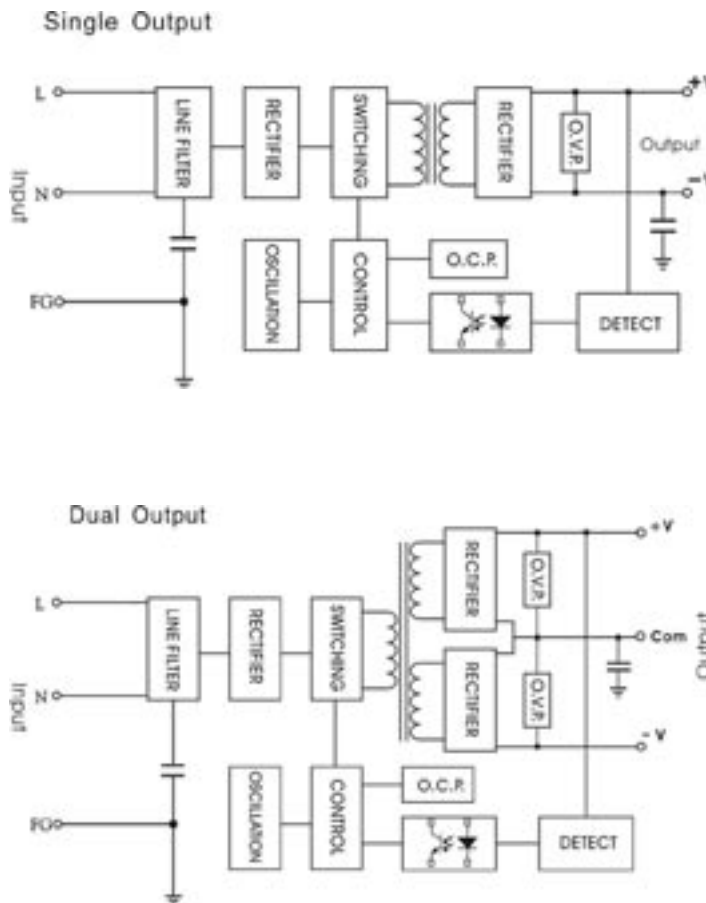
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

### MECHANICAL DIMENSION ( Top View )



PIN#	SINGLE	Dual
1	FG	FG
2	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)
4	-DC OUT	-DC OUT
5	NO PIN	COMMON
6	+DC OUT	+DC OUT

### BLOCK DIAGRAM



### DERATING

