

APC-DN Series

Max 5W AC/DC DIN Rail Power Supplies

CoolPower
Solutions

KEY FEATURES

- DIN Rail Switching Power Supply
- 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.	APC-3.3S-DN	APC-5S-DN	APC-12S-DN	APC-15S-DN	APC-24S-DN
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.					
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					
Environment	Input-FG (V.AC)				
	1500V				
	Output-FG (V.AC)				
	500V				
	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)				
	2.28 x 3.46 x 1.9 Inches (58.0 x 88.0 x 48.0 mm) Tolerance± 0.5 mm				
	Case Material				
	Plastic resin with Fiberglass (flammability to UL 94V-2)				
Weight					
140 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					

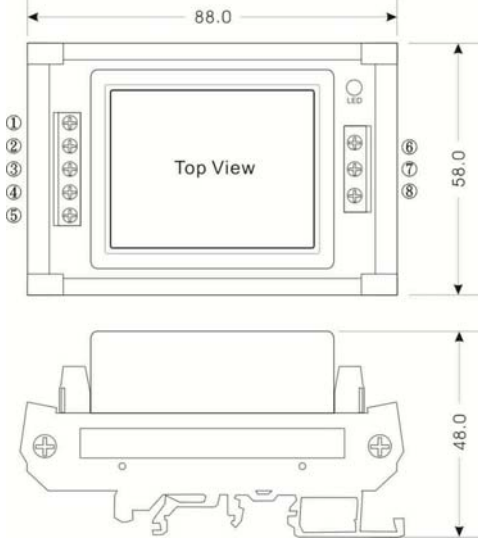
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

ELECTRICAL SPECIFICATIONS

Model No.	APC-5D-DN	APC-12D-DN	APC-15D-DN
Max Output Wattage (W)	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.			
Output	Voltage (V.DC.)		± 12V
	± 5V		± 15V
	Voltage Accuracy		
	±2%		
	Current (mA) max		± 200
	± 500		± 160
	Line Regulation (LL-HL) (typ.)		
	±0.3%		
	Load Regulation (5-100%) (typ.)		
	±0.5%		
	Minimum Load		0%
	0%		3%
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		67%	
70%		67%	
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			
Environment	Input-FG (V.AC)		
	1500V		
	Output-FG (V.AC)		
	500V		
	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)		
	2.28 x 3.46 x 1.9 Inches (58.0 x 88.0 x 48.0 mm) Tolerance ± 0.5 mm		
	Case Material		
	Plastic resin with Fiberglass (flammability to UL 94V-2)		
Weight			
140 g			
Cooling Method			
Free air convection			
Safety	Agency Approvals		
UL/cUL, CE, TUV			
EMC	EMI (Conducted & Radiated Emission)		
	EN 55022 class B		
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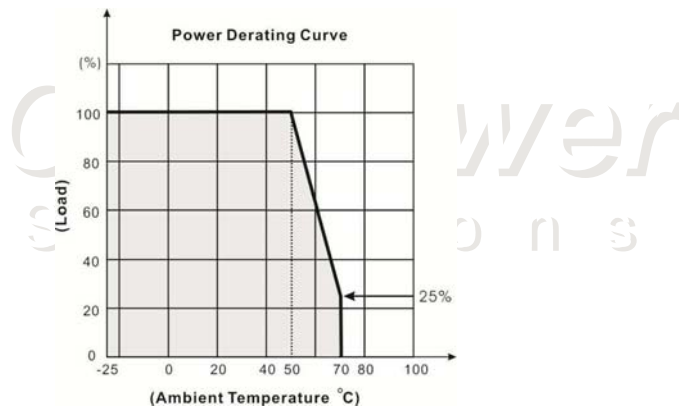
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

MECHANICAL DIMENSION (Top View)



PIN#	SINGLE	DUAL
1	FG	FG
2	DO NOT CONNECT	DO NOT CONNECT
3	AC IN (N)	AC IN (N)
4	DO NOT CONNECT	DO NOT CONNECT
5	AC IN (L)	AC IN (L)
6	-DC OUT	-DC OUT
7	DO NOT CONNECT	COMMON
8	+DC OUT	+DC OUT

DERATING



BLOCK DIAGRAM

