



ANC-E1 SERIES

15 Watts

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, UL, TUV Approval
- 2-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	ANC-5S-E1	ANC-12S-E1	ANC-15S-E1	ANC-24S-E1
Max Output Wattage (W)	15W	15W	15W	15W
Input	Voltage			
	90-264 VAC or 120-370 VDC			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
	280 mA max. (115 VAC) / 170 mA max. (230 VAC)			
Inrush Current (<2ms)				
23 A max. (115 VAC) / 46 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	24V
	Voltage Accuracy			
	±2%			
	Current (mA) max			
	3000	1250	1000	625
	Line Regulation (LL-HL) (typ.)			
	±0.5%			
	Load Regulation (5-100%) (typ.)			
	±0.5%			
	Minimum Load			
4%	2%	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				
70%	73%	73%	77%	
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			
	-40°C...+70°C (with derating)			
	Storage Temperature			
	-40°C...+85°C			
	Temperature Coefficient			
±0.02%/°C				
Humidity				
95% RH				
MTBF				
>200,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)			
	2.91 x 2.13 x 0.87 Inches (74.0 x 54.0 x 22.0 mm) Tolerance ±0.5 mm			
	Case Material			
	Plastic resin with Fiberglass (flammability to UL 94V-0)			
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 55024				

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



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ELECTRICAL SPECIFICATIONS

Model No. (Dual, Triple Output)	ANC-5D-E1	ANC-12D-E1	ANC-15D-E1	ANC-5S12D-E1	ANC-5S15D-E1			
Max Output Wattage (W)	15W	15W	15W	15W	15W			
Input	Voltage							
	90-264 VAC or 120-370 VDC							
	Frequency (Hz)							
	47-440 Hz							
	Current (Full load)							
	280 mA max. (115 VAC) / 170 mA max. (230 VAC)							
Inrush Current (<2ms)								
23 A max. (115 VAC) / 46 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	5/±12	5/±15	
	Voltage Accuracy				±5%		±2%	
	Current (mA) max		±1500	±650	±500	2000/±200	2000/±150	
	Line Regulation (LL-HL) (typ.)				±0.5%		±1% / ±5%	
	Load Regulation (5-100%) (typ.)				±3%		±2% / ±5%	
	Minimum Load				0%		5V 10% (200 mA)	
	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		71%	76%	65%	68%	68%	
	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					-40°C...+70°C (with derating)		
	Storage Temperature					-40°C...+85°C		
	Temperature Coefficient					±0.02%/°C		
	Humidity					95% RH		
	MTBF					>200,000 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimension (L x W x H)					2.91 x 2.13 x 0.87 Inches (74.0 x 54.0 x 22.0 mm) Tolerance ±0.5 mm		
	Case Material					Plastic resin with Fiberglass (flammability to UL 94V-0)		
	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 55024		

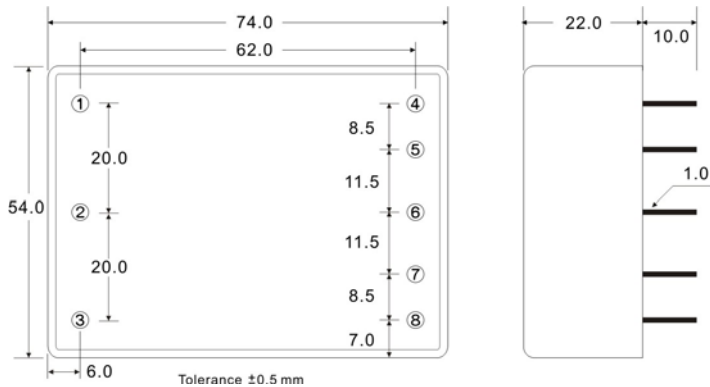
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ANC-E1 SERIES

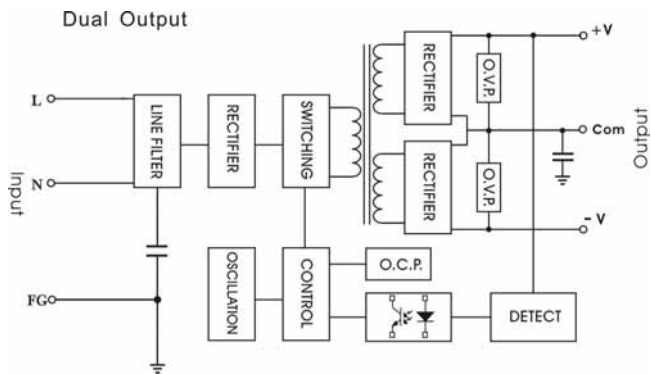
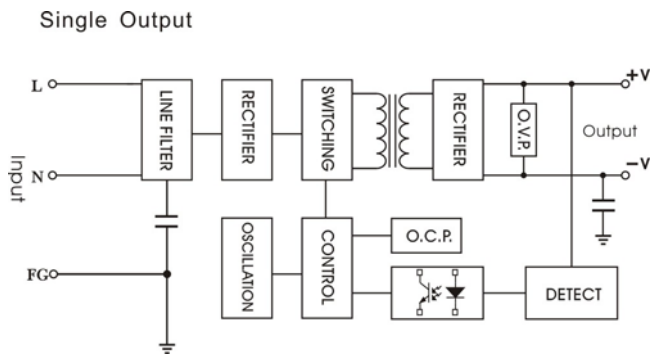
15 Watts

MECHANICAL DIMENSION (Top View)

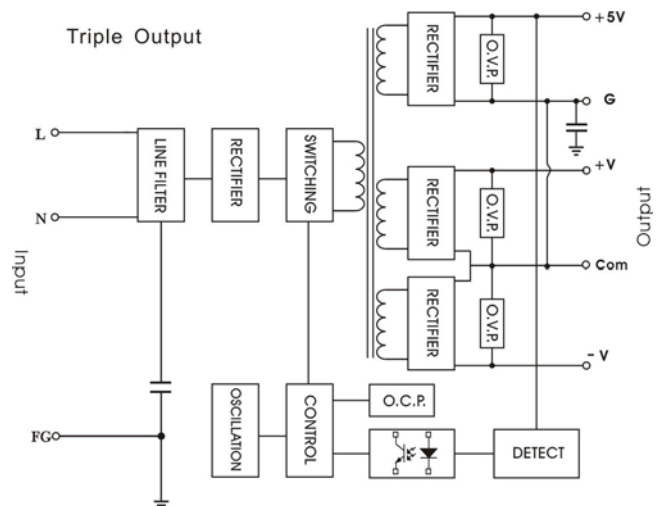
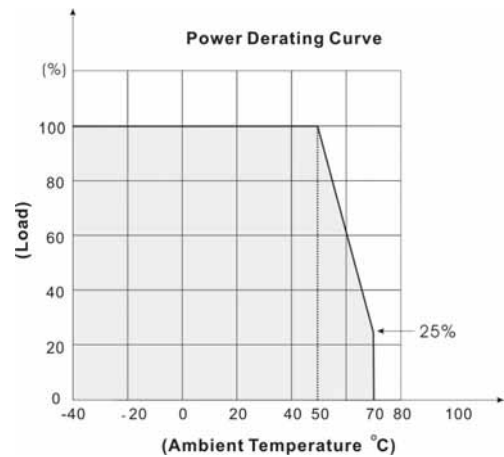


PIN#	SINGLE	Dual	Triple
1	FG	FG	FG
2	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)
4	NO PIN	NO PIN	-DC OUT
5	-DC OUT	-DC OUT	COMMON
6	NO PIN	COMMON	+DC OUT
7	+DC OUT	+DC OUT	+5V RTN
8	NO PIN	NO PIN	+5V OUT

BLOCK DIAGRAM



DERATING



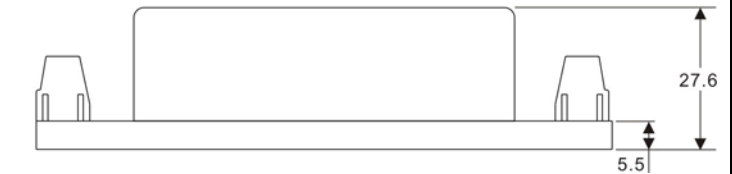
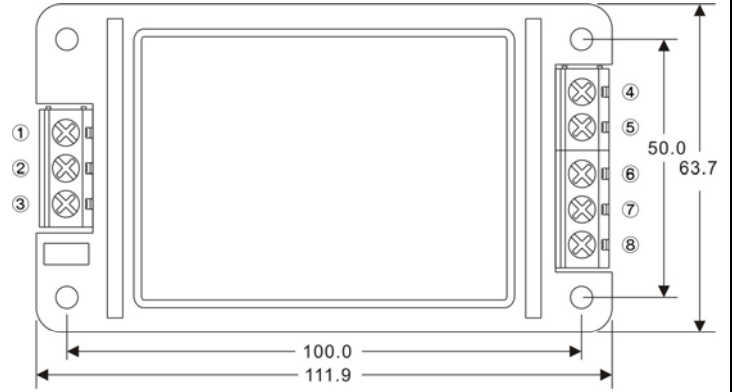


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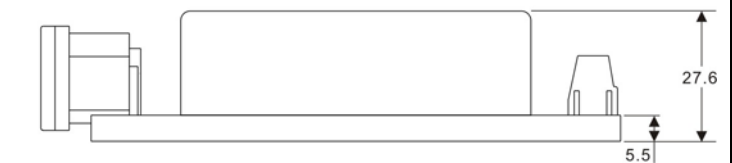
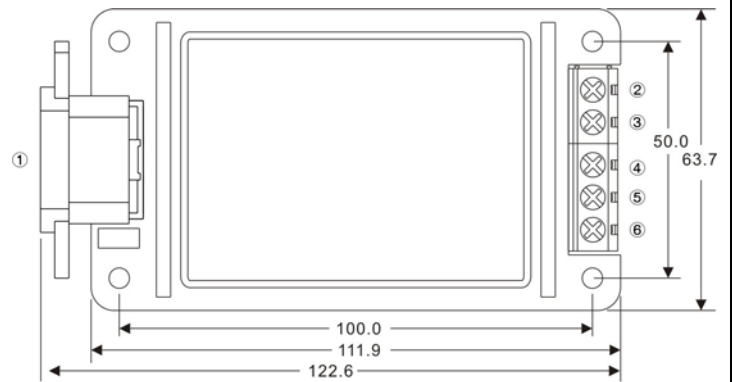
SCREW TERMINAL

ANC-E1-A2



PIN#	Single	Dual	Triple
1	FG	FG	FG
2	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)
4	NO CONNECT	NO CONNECT	-DC OUT
5	-DC OUT	-DC OUT	COMMON
6	NO CONNECT	COMMON	+DC OUT
7	+DC OUT	+DC OUT	+5V RTN
8	NO CONNECT	NO CONNECT	+5V OUT

ANC-E1-A4



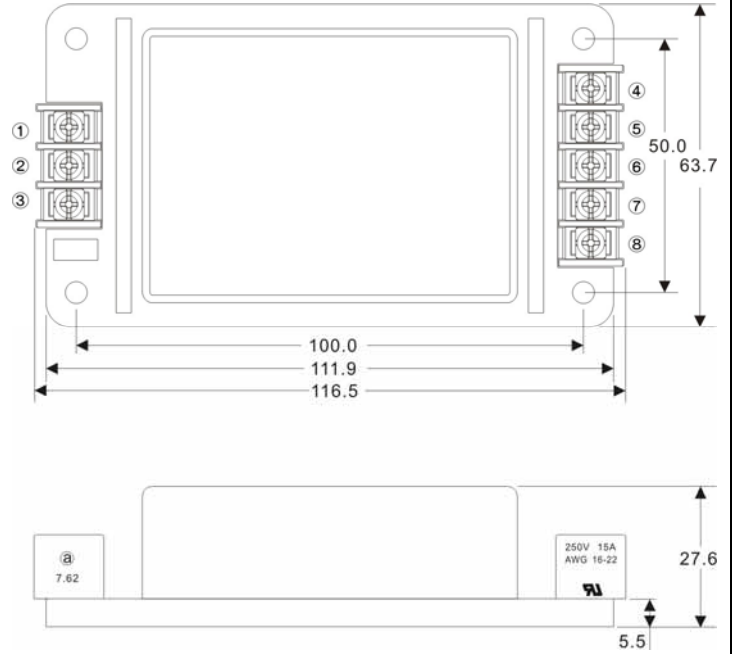
PIN#	Single	Dual	Triple
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	-DC OUT
3	-DC OUT	-DC OUT	COMMON
4	NO CONNECT	COMMON	+DC OUT
5	+DC OUT	+DC OUT	+5V RTN
6	NO CONNECT	NO CONNECT	+5V OUT



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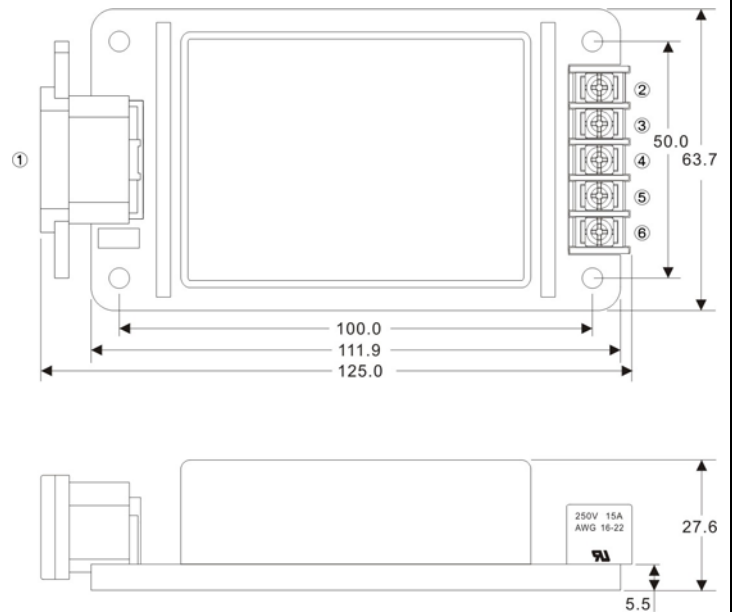
15 Watts

ANC-E1-A5



PIN#	Single	Dual	Triple
1	FG	FG	FG
2	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)
4	NO CONNECT	NO CONNECT	-DC OUT
5	-DC OUT	-DC OUT	COMMON
6	NO CONNECT	COMMON	+DC OUT
7	+DC OUT	+DC OUT	+5V RTN
8	NO CONNECT	NO CONNECT	+5V OUT

ANC-E1-A7



PIN#	Single	Dual	Triple
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	-DC OUT
3	-DC OUT	-DC OUT	COMMON
4	NO CONNECT	COMMON	+DC OUT
5	+DC OUT	+DC OUT	+5V RTN
6	NO CONNECT	NO CONNECT	+5V OUT