



ASC SERIES

30 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, CB, UL, TUV Approval
- 2-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	ASC-3.3S	ASC-5S	ASC-12S	ASC-15S	ASC-24S		
Max Output Wattage (W)	20W	30W	30W	30W	30W		
Input	Voltage						
	90-264 VAC or 120-370 VDC						
	Frequency (Hz)						
	47-440 Hz						
	Current (Full load)						
	520 mA max. (115 VAC) / 320 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		6000	6000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)		±1%				
	Load Regulation (5-00%) (typ.)		±1%				
	Minimum Load		5%	4%	2%	2%	2%
	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%	75%	80%	80%	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)		3000 V				
Environment	Operating Temperature		-25°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)		3.5 x 2.5 x 0.98 Inches (89.0 x 63.5 x 25.0 mm) Tolerance ±0.5 mm				
	Case Material		Plastic resin with Fiberglass (flammability to UL 94V-0)				
	Weight		220 g				
	Cooling Method		Free air convection				
Safety	Agency Approvals		UL/cUL, CE, TUV, CB				
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)	ASC-5D	ASC-12D	ASC-15D	ASC-5S12S	ASC-5S12D	ASC-5S15D	
Max Output Wattage (W)	30W	30W	30W	30W	30W	30W	
Input	Voltage						
	90-264 VAC or 120-370 VDC						
	Frequency (Hz)						
	47-440 Hz						
	Current (Full load)						
	520 mA max. (115 VAC) / 320 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	5/12	5/±12	
	Voltage Accuracy	±5%			±2%		
	Current (mA) max	±3000	±1250	±1000	3000/1250	3000/±630	3000/±500
	Line Regulation (LL-HL) (typ.)	±1%			±1% / ±5%		
	Load Regulation (5-00%) (typ.)	±3%			±2% / ±6%		
	Minimum Load	2%	3%	1%	20%	20%	20%
	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	73%	78%	76%	77%	77%	76%
	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)	3000 V					
Environment	Operating Temperature	-25°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)	3.5 x 2.5 x 0.98 Inches (89.0 x 63.5 x 25.0 mm) Tolerance ±0.5 mm					
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)					
	Weight	220 g					
	Cooling Method	Free air convection					
Safety	Agency Approvals	UL/cUL, CE, TUV, CB					
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.

Note

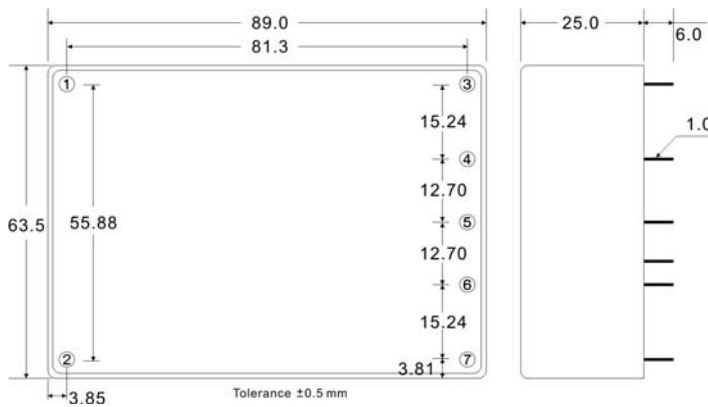
- The triple output required a minimum 20% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices; however they may not meet all listed specification.
- Load regulation for triple output:
Main output (V1): 20% to 100% with 20% to 100% balanced on auxiliaries.
Auxiliary outputs (V2 and V3): 20% to 100% balanced on all outputs.
- Cross regulation for triple output:
Main output 100% load, auxiliary 100%, other auxiliary 25% to 100%.
Auxiliary outputs (V2 and V3): Main output 100% load, auxiliary 100%, other auxiliary 25% to 100% or main output 25%, auxiliary 25%, other auxiliary 25% to 100%.



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MECHANICAL DIMENSION (Top View)

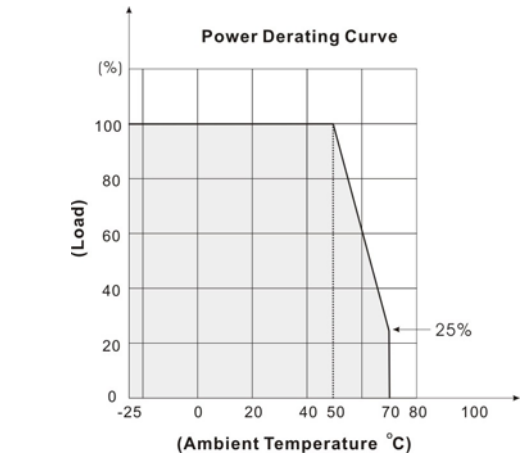
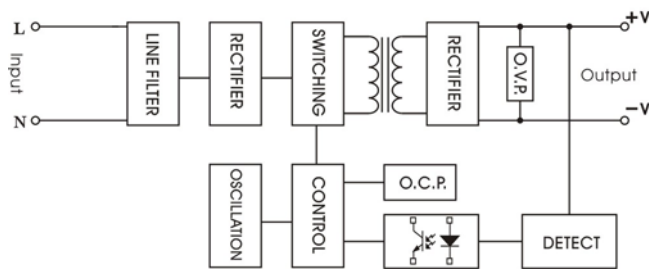


PIN#	Single	Dual	5S/12S	Triple
1	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
2	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
3	+DC OUT	+DC OUT	+12V OUT	+DC OUT
4	NO PIN	NO PIN	+5V OUT	+5V OUT
5	-DC OUT	COMMON	+12V RTN	COMMON
6	NO PIN	NO PIN	+5 VRTN	+5V RTN
7	NOCONNECT	-DC OUT	NO PIN	-DC OUT

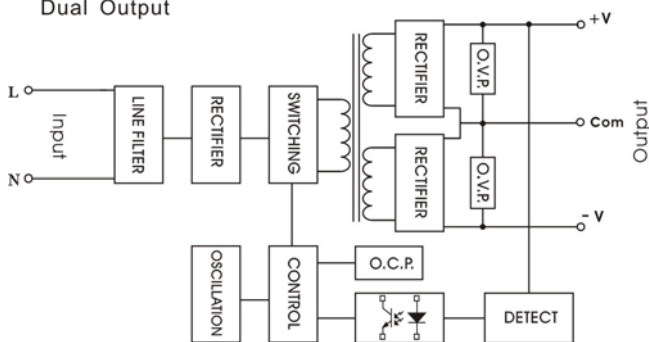
BLOCK DIAGRAM

DERATING

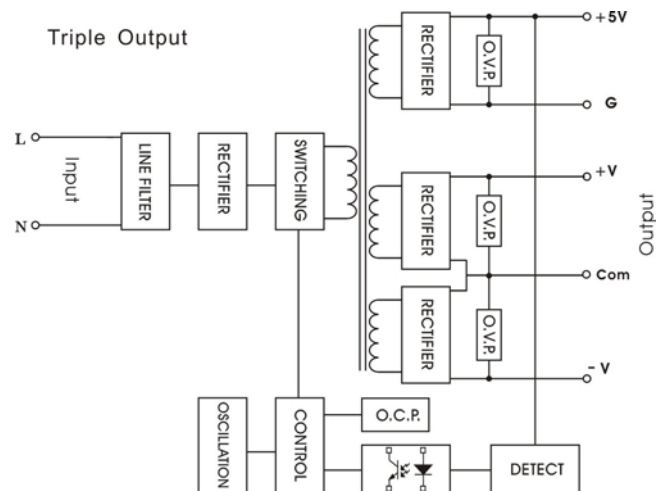
Single Output



Dual Output



Triple Output



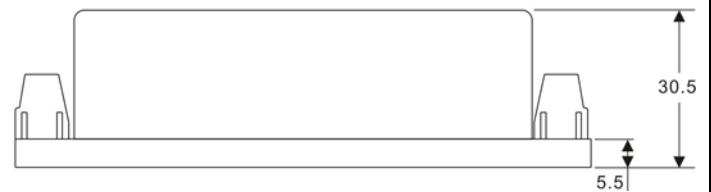
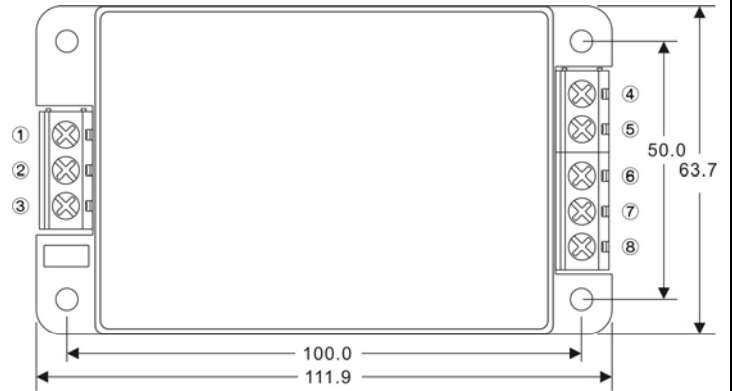


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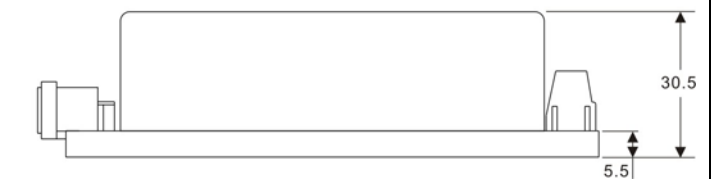
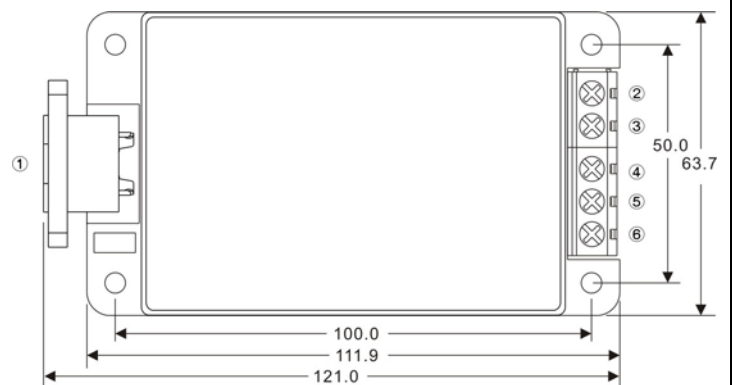
SCREW TERMINAL

ASC-A2



PIN#	Single	Dual	5S/12S	Triple
1	NOCONNECT	NOCONNECT	NOCONNECT	NOCONNECT
2	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
4	+DC OUT	+DC OUT	+12V OUT	+DC OUT
5	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
6	-DC OUT	COMMON	+12V RTN	COMMON
7	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
8	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT

ASC-A3



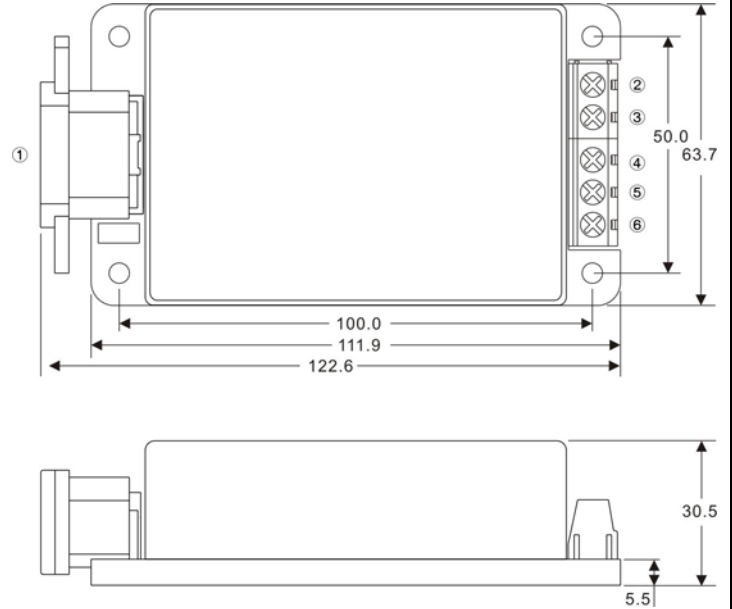
PIN#	Single	Dual	5S/12S	Triple
1	AC IN	AC IN	AC IN	AC IN
2	+DC OUT	+DC OUT	+12V OUT	+DC OUT
3	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
4	-DC OUT	COMMON	+12V RTN	COMMON
5	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
6	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT



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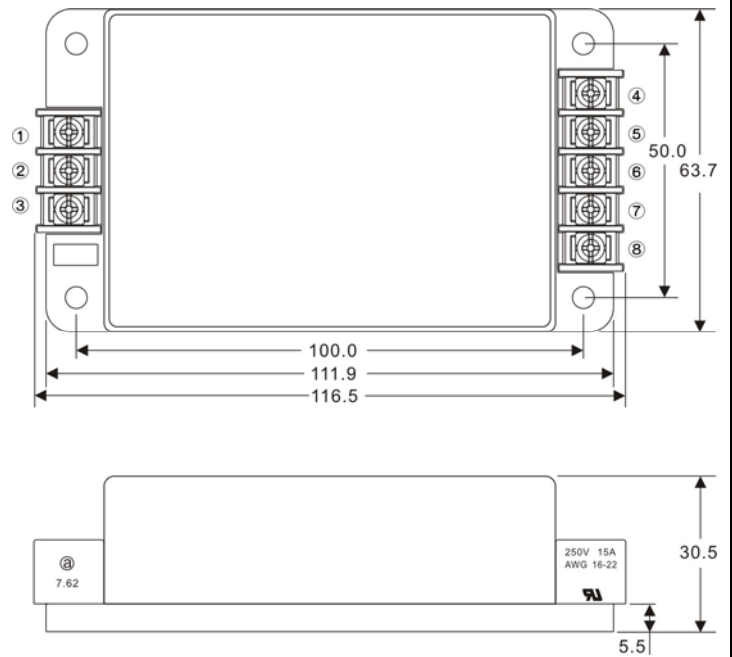
30 Watts

ASC-A4



PIN#	Single	Dual	5S/12S	Triple
1	AC IN	AC IN	AC IN	AC IN
2	+DC OUT	+DC OUT	+12V OUT	+DC OUT
3	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
4	-DC OUT	COMMON	+12V RTN	COMMON
5	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
6	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT

ASC-A5



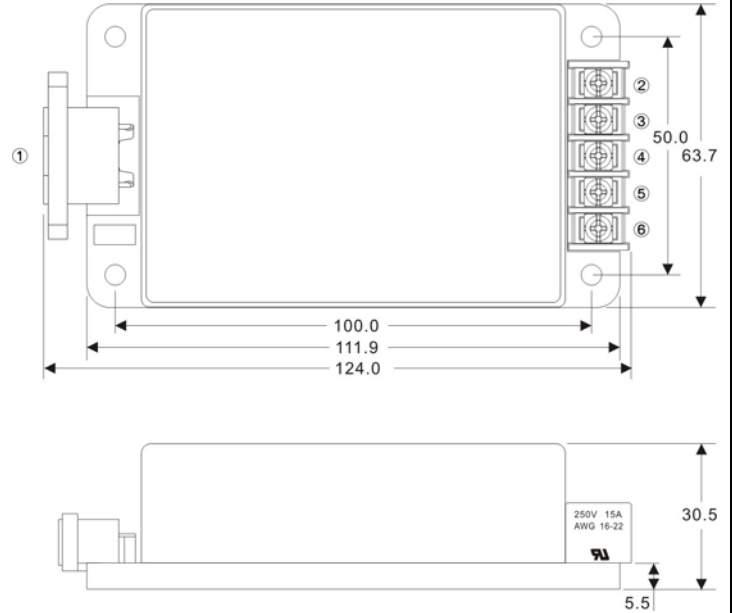
PIN#	Single	Dual	5S/12S	Triple
1	NOCONNECT	NOCONNECT	NOCONNECT	NOCONNECT
2	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
4	+DC OUT	+DC OUT	+12V OUT	+DC OUT
5	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
6	-DC OUT	COMMON	+12V RTN	COMMON
7	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
8	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT



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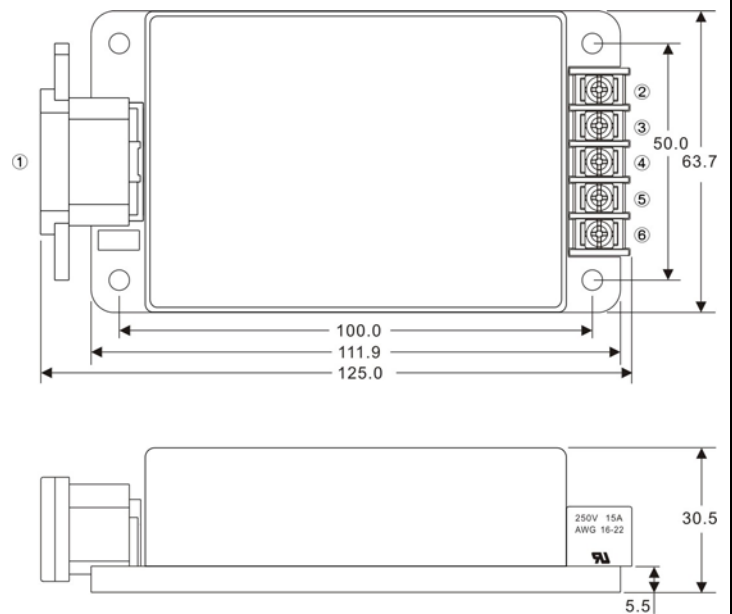
30 Watts

ASC-A6



PIN#	Single	Dual	5S/12S	Triple
1	AC IN	AC IN	AC IN	AC IN
2	+DC OUT	+DC OUT	+12V OUT	+DC OUT
3	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
4	-DC OUT	COMMON	+12V RTN	COMMON
5	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
6	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT

ASC-A7



PIN#	Single	Dual	5S/12S	Triple
1	AC IN	AC IN	AC IN	AC IN
2	+DC OUT	+DC OUT	+12V OUT	+DC OUT
3	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
4	-DC OUT	COMMON	+12V RTN	COMMON
5	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
6	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT