

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 100-370 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	5/±15
	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.

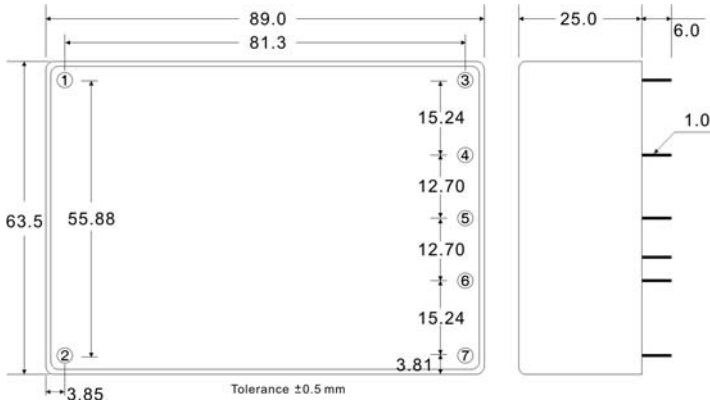
Note

- 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)

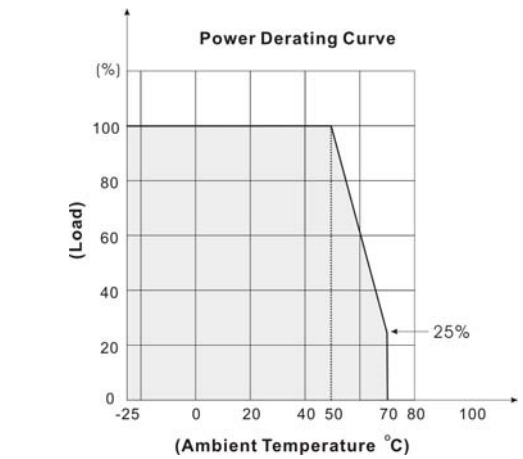
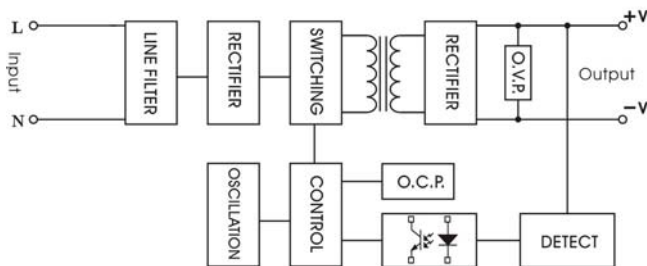


PIN#	Single	Dual	5S/12S	Triple
1	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
2	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
3	+DC OUT	+DC OUT	+12V OUT	+DC OUT
4	NO PIN	NO PIN	+5V OUT	+5V OUT
5	-DC OUT	COMMON	+12V RTN	COMMON
6	NO PIN	NO PIN	+5 VRTN	+5V RTN
7	NOCONNECT	-DC OUT	NO PIN	-DC OUT

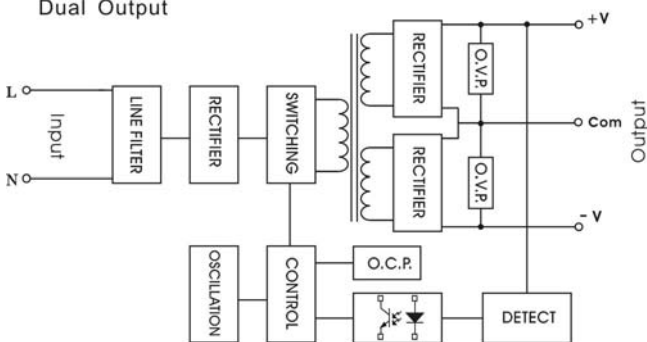
BLOCK DIAGRAM

DERATING

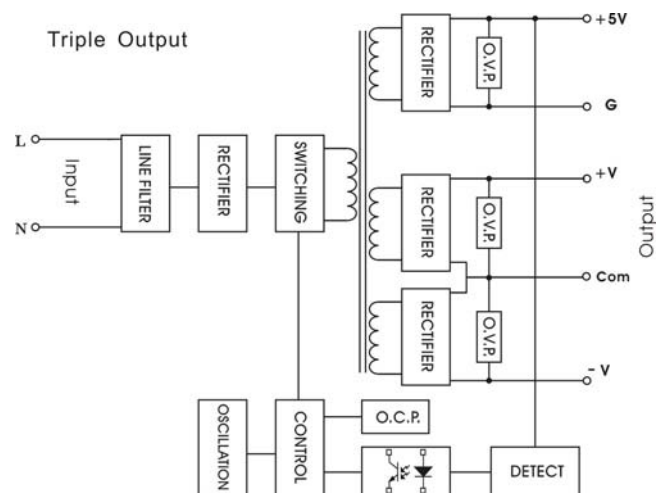
Single Output



Dual Output

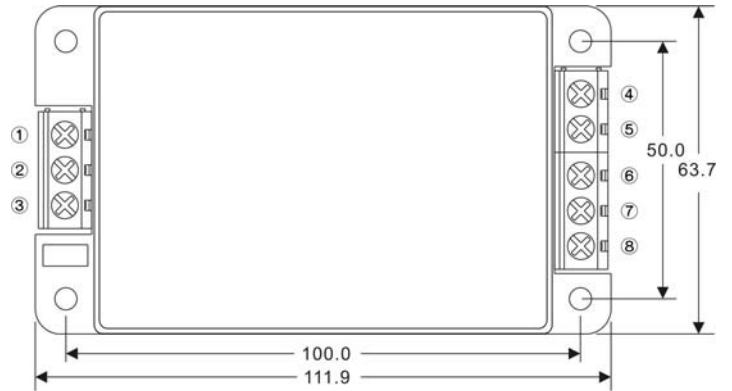


Triple Output

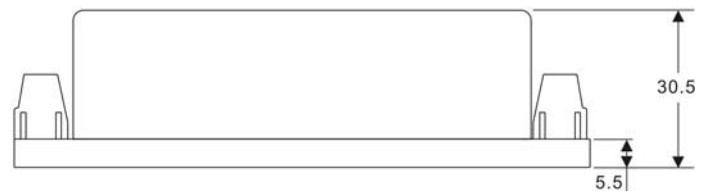


SCREW TERMINAL

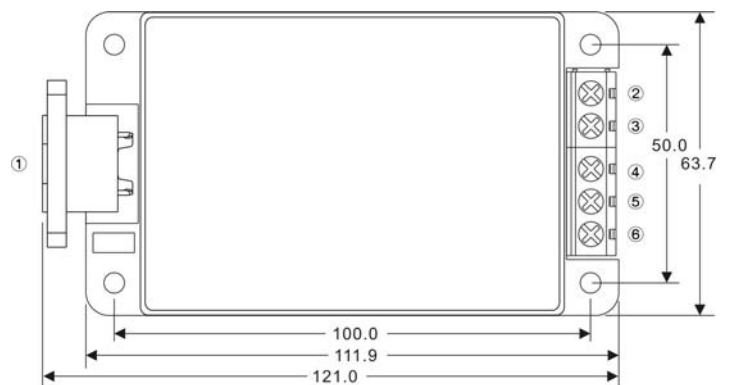
ASC-A2



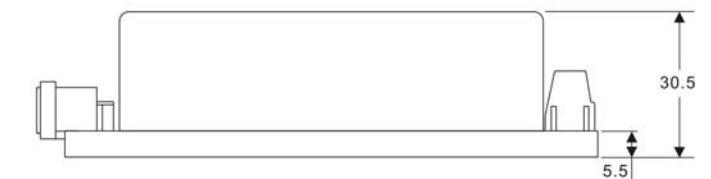
PIN#	Single	Dual	5S/12S	Triple
1	NOCONNECT	NOCONNECT	NOCONNECT	NOCONNECT
2	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
4	+DC OUT	+DC OUT	+12V OUT	+DC OUT
5	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
6	-DC OUT	COMMON	+12V RTN	COMMON
7	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN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



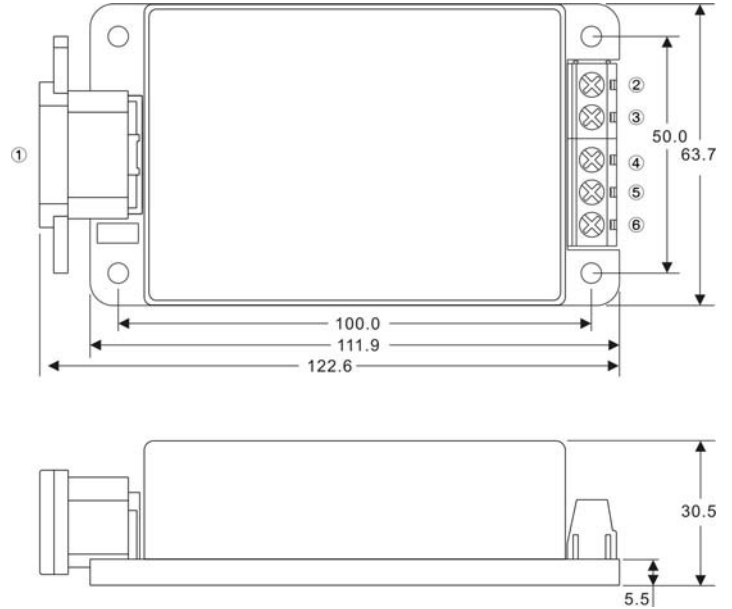
ASC-A3



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

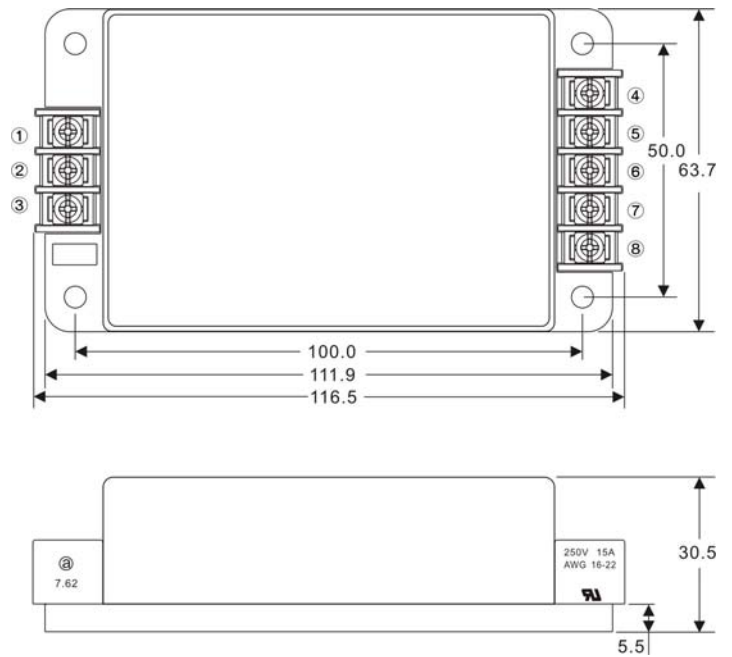


ASC-A4



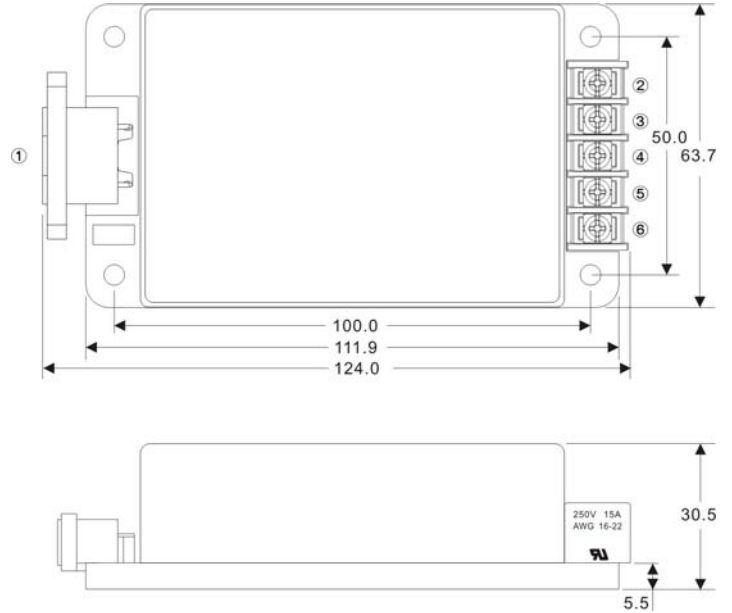
PIN#	Single	Dual	5S/12S	Triple
1	AC IN	AC IN	AC IN	AC IN
2	+DC OUT	+DC OUT	+12V OUT	+DC OUT
3	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
4	-DC OUT	COMMON	+12V RTN	COMMON
5	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN
6	NOCONNECT	-DC OUT	NOCONNECT	-DC OUT

ASC-A5



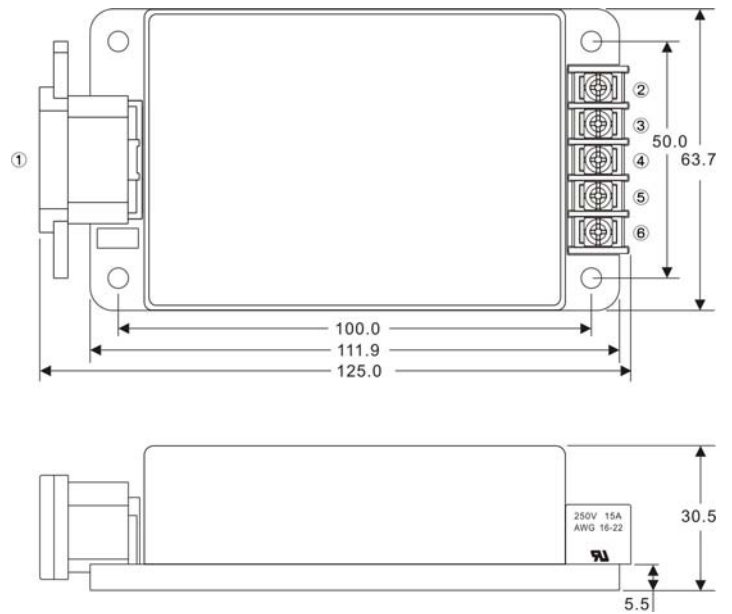
PIN#	Single	Dual	5S/12S	Triple
1	NOCONNECT	NOCONNECT	NOCONNECT	NOCONNECT
2	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
3	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
4	+DC OUT	+DC OUT	+12V OUT	+DC OUT
5	NOCONNECT	NOCONNECT	+5V OUT	+5V OUT
6	-DC OUT	COMMON	+12V RTN	COMMON
7	NOCONNECT	NOCONNECT	+5V RTN	+5V RTN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

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