

**KEY FEATURES**

- Switching Power Modules for PCB Mounting
- Fully Encapsulated Plastic Case
- Universal Input Range 90-260VAC, 47-440 Hz
- Regulated Output
- Low Ripple and Noise
- High Efficiency
- CE, cUL, TUV, CB Approvals
- 2-Year 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				
	90-260 VAC or 120-370 VDC				
	Frequency (Hz)				
	47-440 Hz				
	Current (Full load)				
	520 mA max. (115 VAC) / 320 mA max. (230 VAC)				
Input	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%	±2%	±2%	±2%	±2%
	Current (mA) max				
	6000	6000	2500	2000	1250
	Line regulation (typ.)				
	±1%	±1%	±1%	±1%	±1%
	Load regulation (5-100%) (typ.)				
	±1%	±1%	±1%	±1%	±1%
	Minimum load				
5%	4%	2%	2%	2%	
Maximum capacitive load					
470-23,000µF depending on model					
Ripple & Noise					
<0.5% Vout +50mV max (Vp-p)					
Efficiency					
73%	80%	84%	84%	84%	
Hold-up time					
15 ms min.					
Switching frequency					
100 kHz	100 kHz	100 kHz	100 kHz	100 kHz	
Protection	Over current 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	3000 V	3000 V	3000 V	3000 V
Environment	Operating temperature				
	-25°C...+71°C				
	Storage temperature				
	-40°C...+85°C				
	Temperature coefficient				
0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C	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)				
	Case Material				
	Plastic resin + 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.

**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						90-260 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	±2%	±2%	±2%	±2%	±2%	±2%
	Current (mA) max	±3000	±1250	±1000	3000/1250	3000/±630	3000/±500
	Line regulation (typ.)	±1%	±1%	±1%	±1%/±5%	±1%/±5%	±1%/±5%
	Load regulation (5-100%) (typ.)	±3%	±3%	±3%	±3%/±6%	±2%/±6%	±2%/±6%
	Minimum load	2%	3%	1%	20%	20%	20%
	Maximum capacitive load	470-23,000µF depending on model					
	Ripple & Noise	<0.5% Vout +50mV max (Vp-p)					
	Efficiency	80%	84%	84%	80%	80%	80%
	Hold-up time	15 ms min.					
	Switching frequency	100 kHz	100 kHz	100 kHz	100 kHz	100 kHz	100 kHz
Protection	Over current 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	3000 V	3000 V	3000 V	3000 V	3000 V
Environment	Operating temperature	-25°C...+71°C					
	Storage temperature	-40°C...+85°C					
	Temperature coefficient	0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C	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)					
	Case Material	Plastic resin + 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 Emission)	EN 55022 class B					
	EMS (Radiated Emission)	EN 55024					

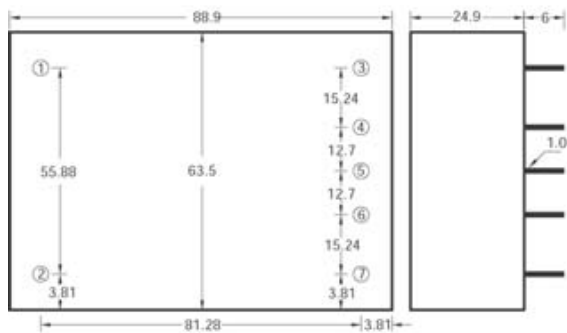
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**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%.

**ASC SERIES** **30 Watts**

**MECHANICAL DIMENSION (Top View)**

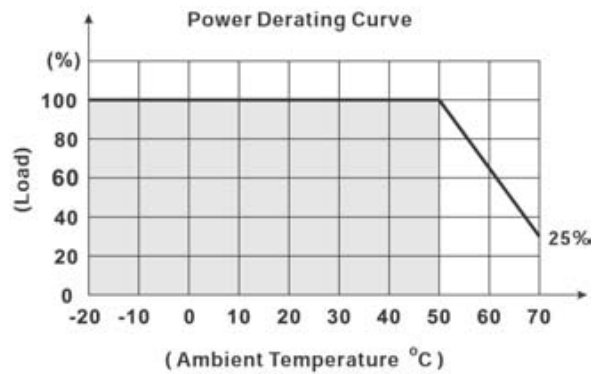
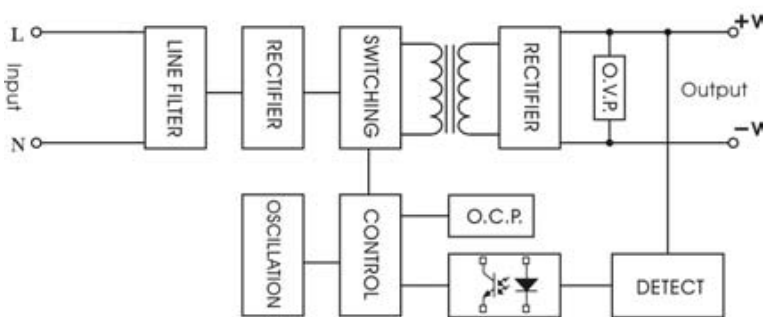


PIN#	SINGLE	Dual	5S/12S	Triple
1	AC-N	AC-N	AC-N	AC-N
2	AC-L	AC-L	AC-L	AC-L
3	+V OUT	+V OUT	+12V	+V OUT2
4	NO PIN	NO PIN	+5V	+5V
5	-V OUT	COMMON	+12 RTN	V2,V3 COMMON
6	NO PIN	NO PIN	+5 RTN	+5 RTN
7	NOCONNECT	-V OUT	NO PIN	-V OUT3

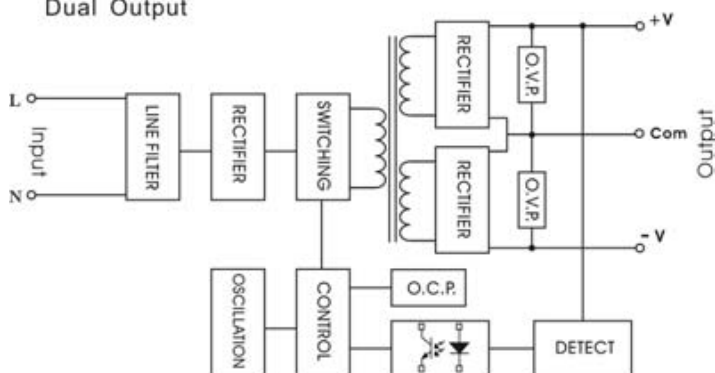
**BLOCK DIAGRAM**

**DERATING**

Single Output



Dual Output



Triple Output

