ARCH ELECTRONICS CORP.

AC-DC Power Module

AVC SERIES 15 Watts

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 50 / 60 Hz
- No-Load Watts < 0.1W
- Ultra Compact Size: 1.62” x 1.07” x 0.75” Inches
- Isolation Class II
- CE, CB, UL Approval
- 3-Year Product Warranty

E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

Model No. (Single Output)		AVC-5S	AVC-12S	AVC-15S	AVC-24S
Max Output Wattage (W)		13.5W	15W		
Input	Voltage	90-264 VAC or 120-370 VDC (N Connect +Vin ; L Connect –Vin)			
	Frequency (Hz)	47-440 Hz			
	Current (Full load)	340 mA max. (115 VAC) / 220 mA max. (230 VAC)			
	Inrush Current	25 A max. (115 VAC) / 45 A max. (230 VAC)) (cold start)			
	Leakage Current	0.25 mA max. (at <240 VAC).			
	External Fuse (mandatory)	2 A slow blow type			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy	±2%			
	Current (mA) max	2700	1250	1000	625
	Line Regulation (LL-HL) (typ.)	±0.5%			
	Load Regulation (10-100%) (typ.)	±1%.			
	Minimum Load	0%			
	Maximum Capacitive Load	7000uF	1500uF	1000uF	470uF
	Ripple & Noise (typ.)	100mV (Vp-p)	120mV (Vp-p)	150mV (Vp-p)	240mV (Vp-p)
	Efficiency (at 230 VAC)	80%	84%	84%	85%
	Hold-up Time (at 230 VAC)	35 ms min.			
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)	4000V			
Environment	Operating Temperature	-40°C…+70°C (with derating)			
	Storage Temperature	-40°C…+85°C			
	Temperature Coefficient	±0.03%/°C			
	Humidity	95% RH			
	MTBF	>350,000 h @ 25°C (MIL-HDBK-217F)			
Physical	Dimension (L x W x H)	1.62 x 1.07 x 0.75 Inches (41.2 x 27.2 x 19.1 mm) Tolerance ±0.5 mm			
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)			
	Weight	Pending			
	Cooling Method	Free air convection			
Safety	Agency Approvals	CE, UL, cUL (Pending)			
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B (Pending)			
	EMS (Noise Immunity)	EN 55024 (Pending)			

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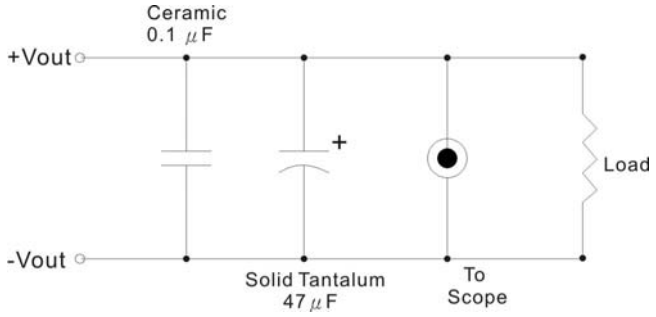
NOTE

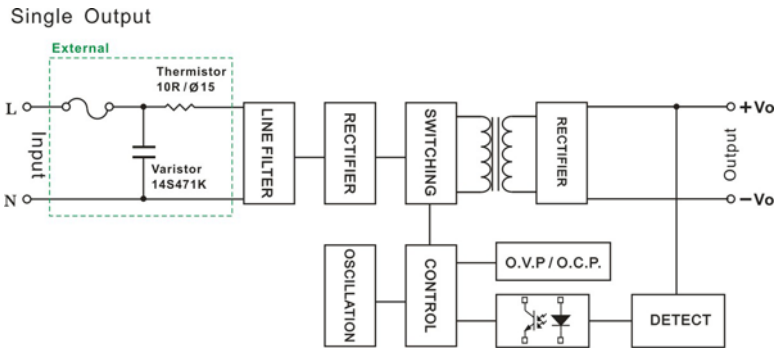
1. All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
3. It's necessary Varistor 14S471K at L / N input side in parallel.
4. It's necessary 10R / 15φ thermistor at L input side in series connection.
5. Safety approvals cover frequency 47-63 Hz.
6. That “natural convection” is about 20LFM but is not equal to still air (0 LFM).

OUTPUT NOISE

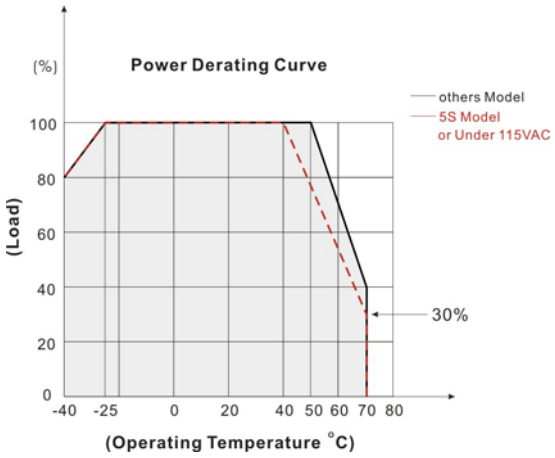
The output noise is measured with 47μF tantalum capacitor and 0.1μF ceramic capacitor across output.



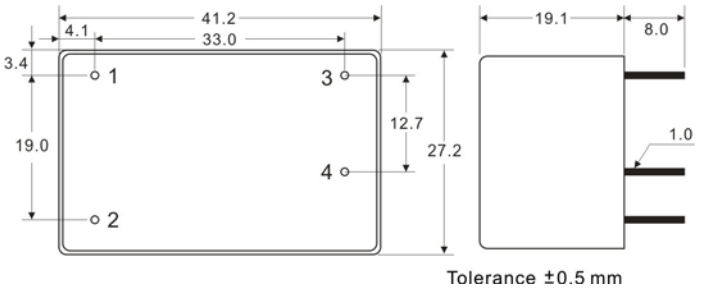
BLOCK DIAGRAM



DERATING



MECHANICAL DIMENSION (Top View)



Tolerance ±0.5 mm

PIN#	Single
1	AC IN (L)
2	AC IN (N)
3	-DC OUT
4	+DC OUT