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, 47-63 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

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

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)	47-63 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	±0.05%/°C			
	Humidity	95% RH			
	MTBF	>450,000 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 (flammability to UL 94V-0)			
	Weight	40 g			
	Cooling Method	Free air convection			
Safety	Agency Approvals	CE, UL, cUL			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B			
	EMS (Noise Immunity)	EN 55024			

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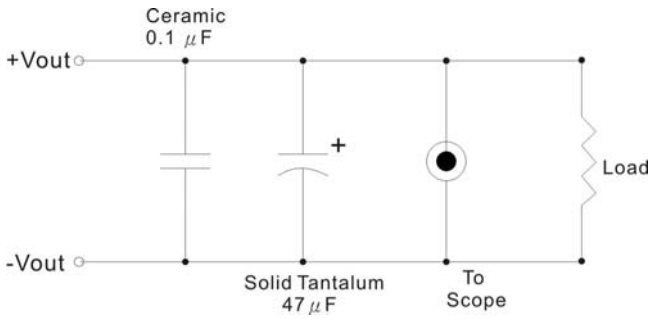
NOTE

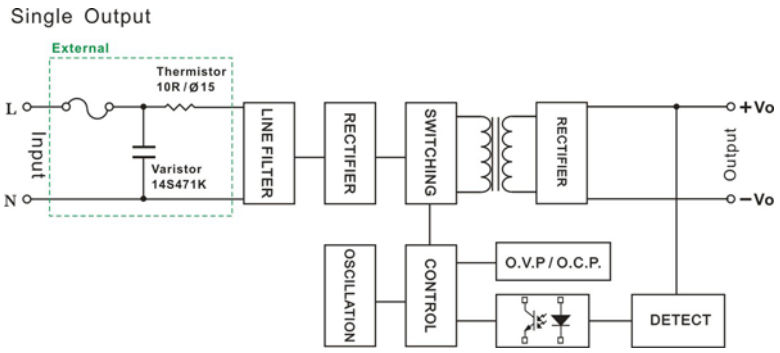
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's necessary Varistor 14S471K at L / N input side in parallel.
3. It's necessary 10R / 15φ thermistor at L input side in series connection.
4. Safety approvals cover frequency 47-63 Hz.
5. That “natural convection” is about 20LFM but is not equal to still air (0 LFM).
6. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

OUTPUT NOISE

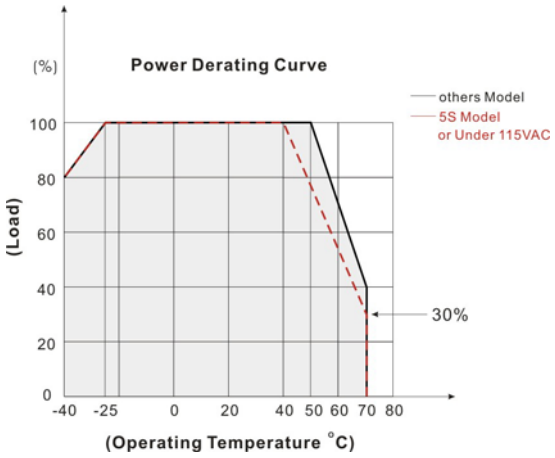
The output noise is measured with 47μF tantalum capacitor and 0.1μF ceramic capacitor across output.



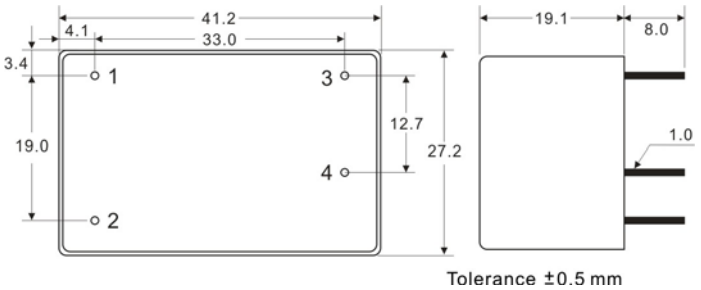
BLOCK DIAGRAM

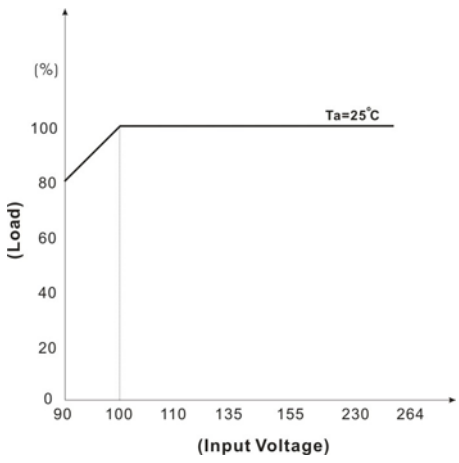


DERATING



MECHANICAL DIMENSION (Top View)



Tolerance ±0.5 mm

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