

KEY FEATURES

- Universal Input Range 90-305VAC, 47-63 Hz
- I/O Isolation 4300VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption < 0.1W
- 5000m Altitude Application
- Over-Voltage Category OVC III
- High Efficiency up to 87%
- Isolation Class II
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1
- Design meet IEC / EN 61558-1, IEC / EN 61558-2-16, IEC / EN 60335-1
- 3-Year Product Warranty



ELECTRICAL SPECIFICATIONS

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

All specifications are valid at nominal input voltage, full load and +25 °C after warm up time unless otherwise stated.					
Model No. (Single Output)		AFCV20-5S	AFCV20-12S	AFCV20-15S	AFCV20-24S
Max Output Wattage (W)		20W			
Input	Voltage	90-305 VAC or 120-430 VDC			
	Frequency (Hz)	47-63 Hz			
	Current (Full load)	385 mA max. (115 VAC) / 250 mA max. (230 VAC)			
	Inrush Current (Cold Start)	30 A max. (115 VAC) / 60 A max. (230 VAC)			
	No Load Power Consumption	< 0.1W (115/230 VAC)			
	External Fuse (mandatory)	2 A slow blow type			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy	±2%			
	Current (mA) max	4000	1670	1330	833
	Maximum Capacitive Load	10000 uF	1500 uF	1000 uF	470 uF
	Minimum Load	0%			
	Line Regulation (LL-HL) (typ.)	±0.5%			
	Load Regulation (typ.)	±1%			
	Ripple & Noise (Full load)	120mV (Vp-p)		1% of Vout	
	Efficiency (at 230VAC)	85%	86%	87%	87%
	Hold-up Time(typ)	6 ms (at 115VAC) / 46 ms (at 230VAC)			
Protection	Over Power Protection	Hiccup technique, auto-recovery			
	Over Voltage Protection	Zener diode clamp			
	Short Circuit Protection	Hiccup mode (automatic recovery)			
Isolation	Input-Output (V.AC)	4300V			
Environment	Operating Temperature (Note 2)	-40°C...+85°C (with derating)			
	Storage Temperature	-40°C...+85°C			
	Temperature Coefficient	±0.05%/°C			
	Altitude During Operation	5000m (UL / IEC / EN 62368-1)			
	Humidity	95% RH			
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F)			
	Over Voltage Category	III: Compliance to EN 61558; altitude up to 2000 meters.			
	Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)			
	Shock	IEC60068-2-27			
Physical	Dimensions (L x W x H)	2.07 x 1.08 x 0.93 Inches (52.5 x 27.5 x 23.5 mm) Tolerance ±0.5 mm			
	Case Material	Plastic resin (flammability to UL 94V-0)			
	Weight	62 g			
	Cooling Method	Free air convection			
Safety	Approval	UL / IEC / EN 62368-1			
	Meet	IEC / EN 61558-1, IEC / EN 61558-2-16, IEC / EN 60335-1			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B			
	EMS (Noise Immunity)	EN 55035			

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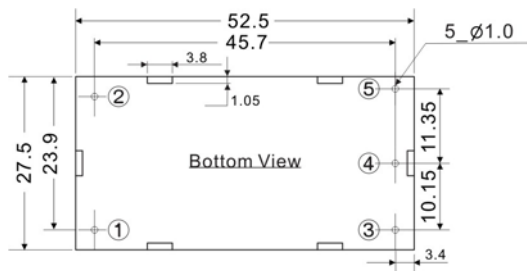
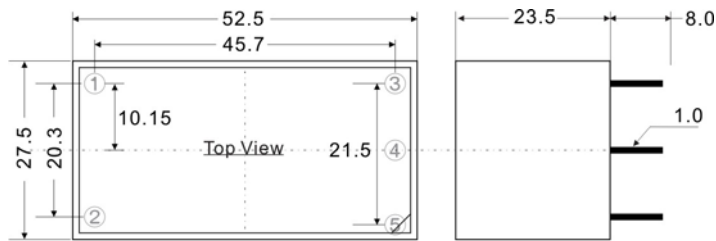
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Dual Output)		AFCV20-5S12S		AFCV20-12D		AFCV20-15D		
Max Output Wattage (W)		18.4W		20W				
Input	Voltage	90-305 VAC or 120-430 VDC						
	Frequency (Hz)	47-63 Hz						
	Current (Full load)	385 mA max. (115 VAC) / 250 mA max. (230 VAC)						
	Inrush Current (Cold Start)	30 A max. (115 VAC) / 60 A max. (230 VAC)						
	No Load Power Consumption	< 0.1W (115/230 VAC)						
	External Fuse (mandatory)	2 A slow blow type						
Output		Output 1	Output 2	Output 1	Output 2	Output 1	Output 2	
	Voltage (V.DC.)	5V	12V	+12V	-12V	+15V	-15V	
	Voltage Accuracy	±5%	±6%	±5%				
	Current (mA) max	2000	700	833	833	666	666	
	Maximum Capacitive Load	5000 uF	750 uF	±1000 uF		±470 uF		
	Minimum Load	10%	20%	25%				
	Line Regulation (LL-HL) (typ.)	±5%						
	Load Regulation (typ.)	20-100% Symmetric Load		25-100% Symmetric Load				
		±2%	±4%	±1%				
	Ripple & Noise (Full load)	150mV (Vp-p)						
	Efficiency (at 230VAC)	81%			85%		85%	
	Hold-up Time(typ)	6 ms (at 115VAC) / 46 ms (at 230VAC)						
	Protection	Over Power Protection	Hiccup technique, auto-recovery					
Over Voltage Protection		Zener diode clamp						
Short Circuit Protection		Hiccup mode (automatic recovery)						
Isolation	Input-Output (V.AC)	4300V						
Environment	Operating Temperature	-40°C...+85°C (with derating)						
	Storage Temperature	-40°C...+85°C						
	Temperature Coefficient	±0.05%/°C						
	Altitude During Operation	5000m (UL / IEC / EN 62368-1)						
	Humidity	95% RH						
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F)						
	Over Voltage Category	III: Compliance to EN 61558; altitude up to 2000 meters.						
	Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)						
	Shock	IEC60068-2-27						
Physical	Dimensions (L x W x H)	2.07 x 1.08 x 0.93 Inches (52.5 x 27.5 x 23.5 mm) Tolerance ±0.5 mm						
	Case Material	Plastic resin (flammability to UL 94V-0)						
	Weight	62 g						
	Cooling Method	Free air convection						
Safety	Approval	UL / IEC / EN 62368-1						
	Meet	IEC / EN 61558-1, IEC / EN 61558-2-16, IEC / EN 60335-1						
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B						
	EMS (Noise Immunity)	EN 55035						

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.
3. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

MECHANICAL DIMENSIONS (Top View)



PIN#	Single	Dual	5S12S
1	AC IN (L)	AC IN (L)	AC IN (L)
2	AC IN (N)	AC IN (N)	AC IN (N)
3	+DC OUT	+DC OUT	+12V OUT
4	-DC OUT	COMMON	+5V OUT
5	NO PIN	-DC OUT	COMMON

DERATING

