

ATCH30 SERIES

30 Watts

KEY FEATURES

- Ultra Compact Size: 2.53" x 1.78"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 88%
- Operating altitude 5000m (UL / IEC / EN 62368-1)
- Screw Terminal for Option
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1, IEC / EN 60950-1, IEC / EN 60335-1, IEC / EN 61558-2-16
- 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.

Model No.		ATCH30-5.1S	ATCH30-12S	ATCH30-15S	ATCH30-24S
Max Output Wattage (W)		23.46W	30W	30W	30W
Input	Voltage	90-305 VAC or 120-430 VDC			
	Frequency (Hz)	47-440 Hz			
	Current (Full load)	600 mA max. (115 VAC) / 400 mA max. (230 VAC)			
	Inrush Current (<2ms, Cold Start)	30 A max. (115 VAC) / 60 A max. (230 VAC)			
	Leakage Current	0.25 mA max. (230 VAC)			
Output	Voltage (V.DC.)	5.1V	12V	15V	24V
	Voltage Accuracy	±2%			
	Current (mA) max	4600	2500	2000	1250
	Maximum Capacitive Load	6800uF	1600uF	1200uF	470uF
	Minimum Load	0%			
	Line Regulation (LL-HL) (typ.)	±1%			
	Load Regulation (0-100%) (typ.)	±3%	±2%		
	Ripple & Noise (Vp-p) (max.)	120mV	150mV	150mV	240mV
	Efficiency (at 230 VAC)	84%	88%	87%	86%
Protection	Hold-up Time (typ)	36 ms (at 230VAC)			
	Over Power Protection	Hiccup technique, auto-recovery			
	Over Voltage Protection	Zener diode clamp			
Isolation	Short Circuit Protection	Hiccup mode (automatic recovery)			
	Input-Output (V.AC)	4000V			
Environment	Operating Temperature (Note 4)	-40°C...+85°C (with derating)			
	Storage Temperature	-40°C...+85°C			
	Temperature Coefficient	±0.02%/°C			
	Altitude During Operation (UL / IEC / EN 62368-1)	5000m			
	Humidity	95% RH			
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F)			
	Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)			
Physical	Shock	IEC60068-2-27			
	Dimensions (L x W x H)	2.54 x 1.79 x 0.87 Inches (64.6 x 45.4 x 22.0 mm) Tolerance ±0.5 mm, Height Tolerance ±1 mm			
	Case Material	Plastic resin (flammability to UL 94V-0)			
	Weight	106 g			
Safety	Cooling Method	Free air convection			
	Agency Approvals	UL / IEC / EN 62368-1, IEC / EN 60950-1, IEC / EN 60335-1(A2 Series N/A), IEC / EN 61558-2-16(A2 Series N/A)			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B			
	EMS (Noise Immunity)	EN 55035			

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NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.



2. **SMPS** incorporating a short-circuit-proof safety isolating transformer (non-inherently)



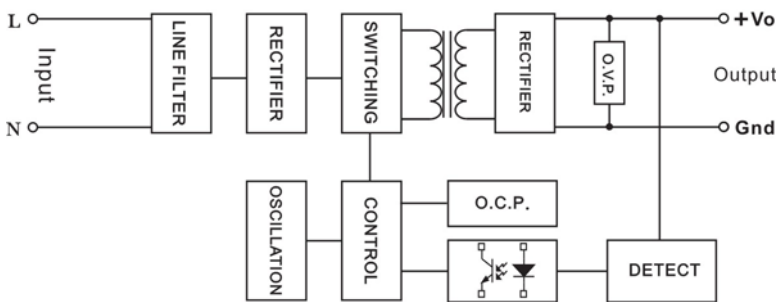
3. **SMPS** (Switching mode power supply unit)

4. 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.

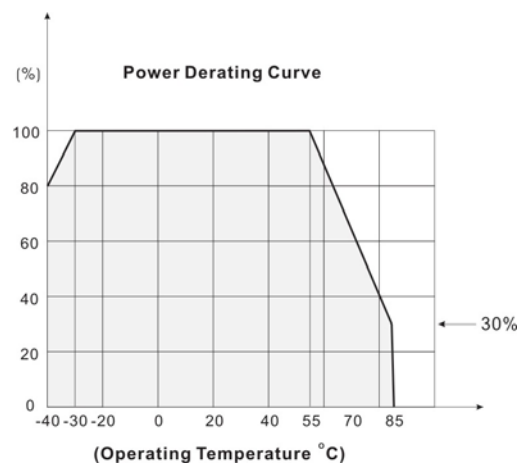
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

BLOCK DIAGRAM

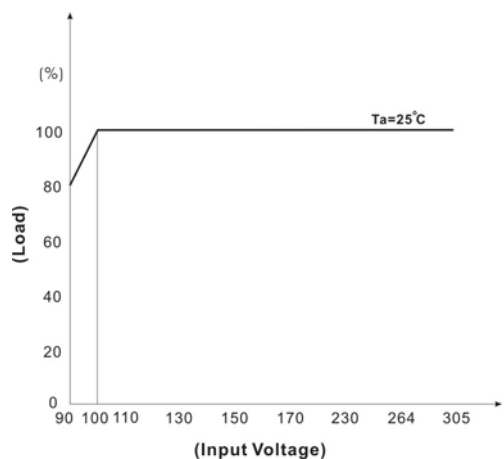
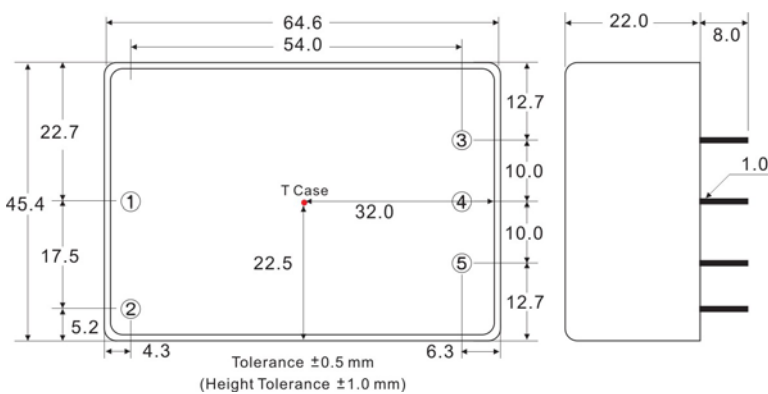
Single Output



DERATING



MECHANICAL DIMENSIONS (Top View)



PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

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SCREW TERMINAL

ATCH30-A2



PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT

