ACM18 series

18W

AC-DC power supplies

The ACM18 series of wall plug adaptors comply with the latest energy efficiency level VI standards with high active mode efficiency and extremely low no load power consumption. Available with a standard jack plug connector these adaptors suit a wide variety of cost sensitive industrial and medical applications while maintaining industry leading performance.

Features

- Energy efficiency level VI
- European CoC tier 2
- Medical and ITE approvals
- Interchangeable mains connectors
- Optional white versions
- Output voltages from 5V to 24V
- Class II construction
- 3 year warranty

Applications

Healthcare

Industrial electronics & Robotics

Medical diagnostic

Technology

Dimensions

88.0 x 30.0 x 49.5 mm (3.46" x 1.18" x 1.95")

Models & ratings

Model Number[1,2,5]	Output Voltage	Output Current	Total Regulation[3]	Efficiency[4]	Output Power
ACM18US05	5.0V	2500mA	±5%	82.5%	12.5W
ACM18US09	9.0V	2000mA		86.7%	18.0W
ACM18US12	12.0V	1500mA		87.5%	
ACM18US15	15.0V	1250mA		87.5%	
ACM18US18	18.0V	1000mA		87.5%	
ACM18US24	24.0V	750mA		87.5%	

Notes:

1. Model number is for body only. AC input plugs must be ordered separately, see AC input plug section.
2. Other output voltages available, contact sales for details.
3. Total regulation includes initial set accuracy, line and load regulation.
4. Typical average value measured at 115VAC.
5. For white case version add suffix '-W' e.g. ACM18US12-W. MOQ applies, contact sales for details.

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Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage	90		264	VAC	
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A
Input current			0.21	A	230 VAC
Inrush current			70	A	240VAC cold start, +25°C
No load input power			75	mW	
Input protection	Internal fuse in line				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage - V1	5		24	VDC	See models and ratings table
Minimum load	No minimum load required				
Start up delay			4	s	
Start up rise time		30		ms	
Hold up time	10			ms	Full load and 100VAC
Total regulation			5	%	See models and ratings table
Transient response			4	% deviation	Recovery within <1% within 500μs for a 60% step load change at 0.15A/μs
Ripple & noise			150	mV pk-pk	Measured with 20MHz Bandwidth and 10μF electrolytic in parallel with 0.1μF ceramic capacitor.
Temperature coefficient			0.05	%/°C	
Short circuit protection	Continuous, trip and restart (hiccup mode) with auto recovery				

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency		87		%	Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 115VAC input
Energy efficiency					Level VI
Isolation: input to output	4000			VAC	2 x MOPP
Switching frequency	24		70	kHz	Variable
Leakage current		30	100	μA	At 264VAC, 60Hz, from output to ground
Mean time between failure	250			khrs	MIL-HDBK-217F, +25°C GB.
Weight		160 (0.35)		g (lb)	Body only

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Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	0		+60	°C	Derate from 100% load at +40°C to 50% load at +60°C
Storage temperature	-20		+85	°C	
Cooling	Natural convection				
Operating humidity	5		90	%	RH, non-condensing
Operating altitude			5000	m	
Shock	1m drop onto concrete on each of 6 axes, non operating				
Vibration	10		300	Hz	2g, 0.3 decades/min, 15 mins for each of 3 axes

ECM: Emissions

Phenomenon	Standard	Test level	Notes & conditions
Conducted	EN55032	Level B	
Radiated	EN55032	Level B	
Harmonic currents	EN61000-3-2	Class A	
Voltage flicker	EN61000-3-3		

EMC: Immunity

Phenomenon	Standard	Test level	Criteria	Notes & conditions
Medical device EMC	IEC60601-1-2	Ed.4.0 : 2014	as below	
Low voltage PSU EMC	EN61204-3	High severity level	as below	
ESD immunity	EN61000-4-2	±15kV Air, ±8kV contact	A	
Radiated immunity	EN61000-4-3	10V/m	A	
EFT/burst	EN61000-4-4	Level 3	A	
Surge	EN61000-4-5	Level 2	A	
Conducted	EN61000-4-6	6V	A	
Magnetic field	EN61000-4-8	30A/m	A	
Dips and interruptions	EN61000-4-11	Dip: 100% 10ms	A	
		Dip: 70% 500ms	B	
		Int: 100% 5000ms	B	
	EN60601-1-2	Dip: 30% 25 AC Cycles	A	
		Int: 100% 0.5 AC Cycle	A	At 8 angles
		Int: 100% 1 AC Cycle	B	
		Int: >95% 5000ms	B	

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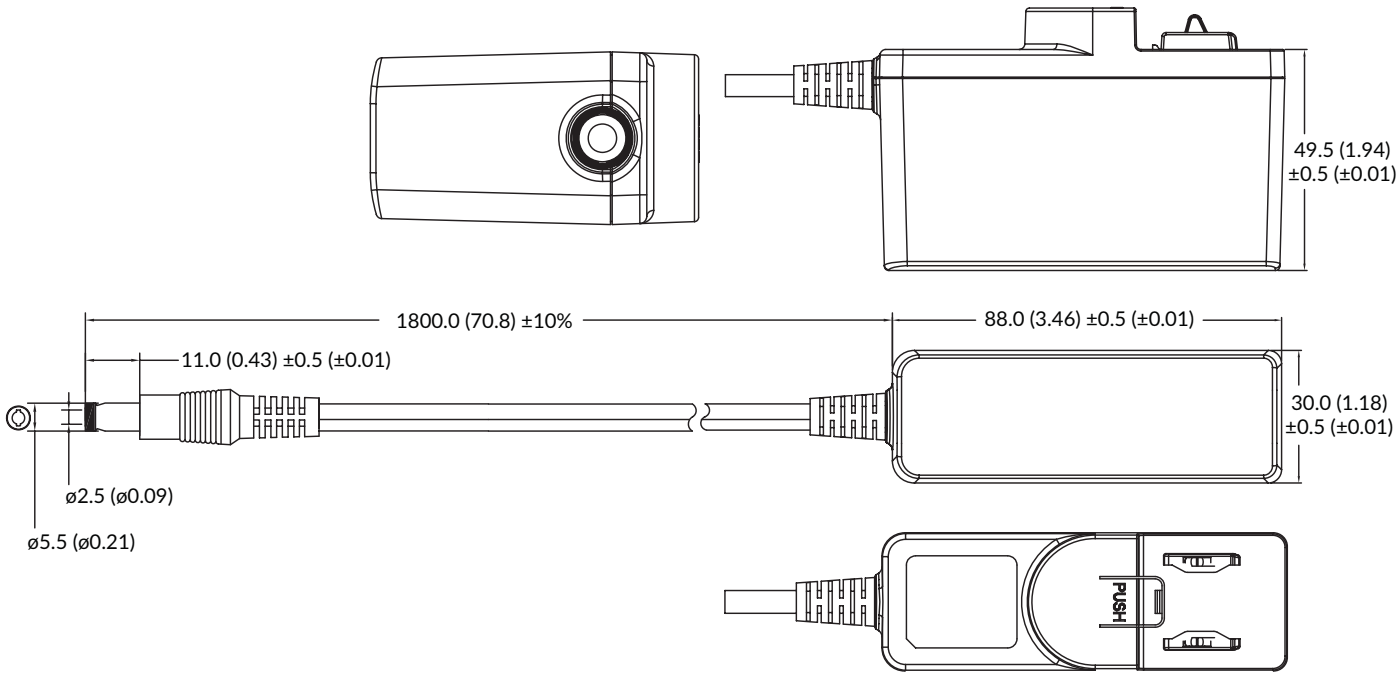
Safety approvals

Certification	Standard	Notes & Conditions
UL	UL60950-1, UL62368-1	Information Technology
	ANSI/AAMI ES60601-1	Medical, 2 x MOPP
EN	EN60950-1, EN62368-1	Information Technology
	EN60601-1	Medical, 2 x MOPP
CB	IEC60950-1, IEC62368-1	Information Technology
	IEC60601-1	Medical, 2 x MOPP
CSA	CSA C22.2 No. 60601	Medical 2 x MOPP
CCC	China Compulsory Certification, GB4943	
AU/NZ	AU/NZ 60950.1	
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details

ACM18USXX



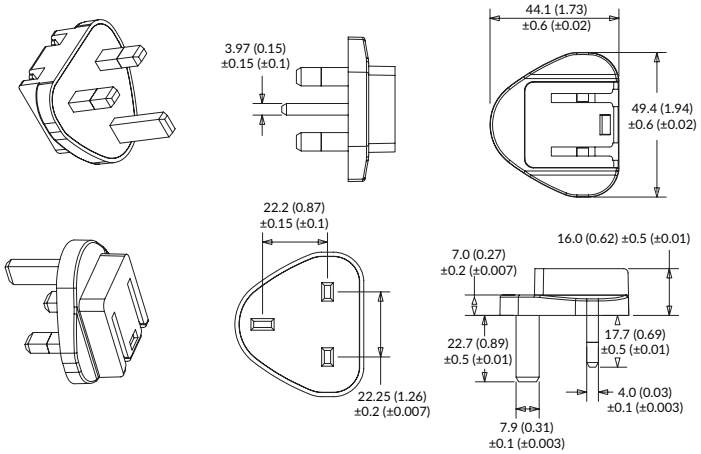
Notes:

1. All dimensions shown in mm (inches).
2. Weight: 160g (0.35lbs) approx.

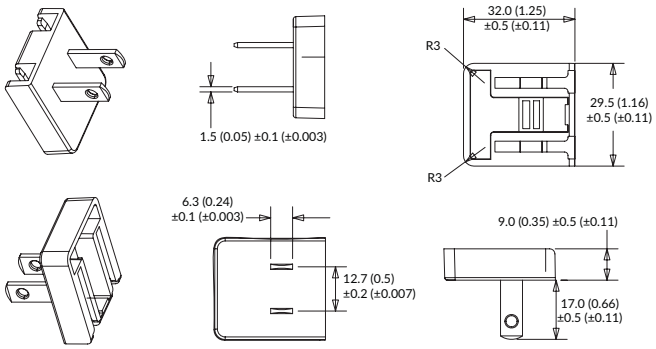
Mechanical details

AC input plugs

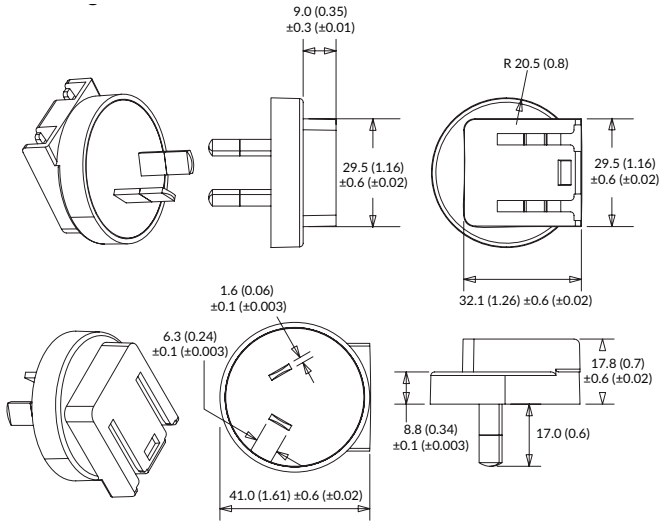
Black UK Plug: ACM PLUG UK
White UK Plug: ACM PLUG UK W



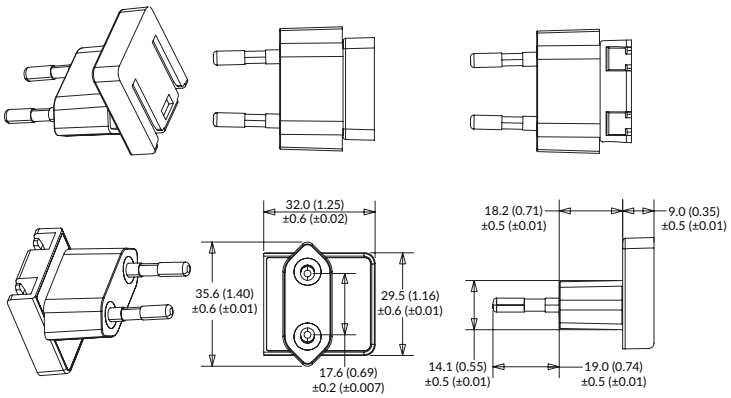
Black USA Plug: ACM PLUG US
White USA Plug: ACM PLUG US W



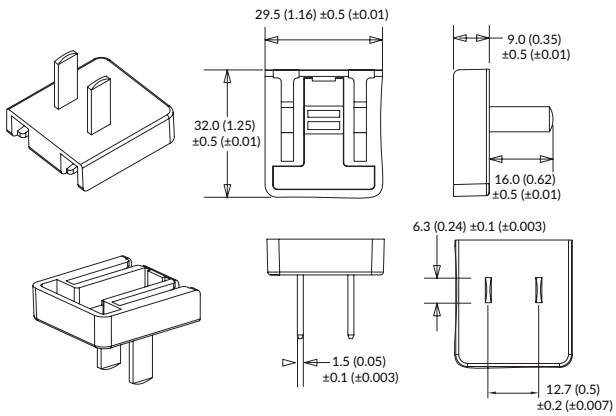
Black Australian Plug: ACM PLUG AU
White Australian Plug: ACM PLUG AU W



Black European Plug: ACM PLUG EU
White European Plug: ACM PLUG EU W



Black China Plug: ACM PLUG CN
White China Plug: ACM PLUG CN W



Specifications subject to change without notice.