

## 12 Watt

- Energy Efficiency Level VI
- European CoC Tier 2
- Medical and ITE Approvals
- Interchangeable Mains Connectors
- Optional White Versions
- Output Voltages from 9 V to 24 V
- Class II Construction
- 3 Years Warranty



The ACM12 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.

### Dimensions:

**ACM (body only):**  
2.99 x 1.19 x 1.9" (76.0 x 30.3 x 48.2 mm)

## Models & Ratings

Output Power	Output Voltage	Output Current	Total Regulation <sup>(3)</sup>	Efficiency <sup>(4)</sup>	Model Number <sup>(1,2,5)</sup>
24 W	5.0V	2000 mA	5%	80.6%	ACM12US05
	9.0V	1330 mA	5%	84.2%	ACM12US09
	12.0V	1000 mA	5%	85.2%	ACM12US12
	15.0V	800 mA	5%	85.2%	ACM12US15
	18.0V	666 mA	5%	84.7%	ACM12US18
	24.0V	500 mA	5%	85.7%	ACM12US24

## 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 25%, 50%, 75% and 100% at 230 VAC.
5. For white case version add suffix '-W' e.g. ACM12US12-W. MOQ applies, contact sales for details.

## Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	90		264	VAC	
Input Frequency	47		63	Hz	
Input Current			0.5	A	230 VAC
Inrush Current			70	A	240 VAC, cold start at 25 °C
Power Factor					EN61000-3-2, class A
No Load Input Power			75	mW	
Input Protection	Internal fuse in both line and neutral				

## Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	5		24	V	See Models and Ratings table
Minimum Load	0			A	No minimum load required
Start Up Delay			4	s	
Start Up Rise Time		30		ms	
Hold Up Time	10			ms	Full load and 100 VAC
Total Regulation			5	%	See Models and Ratings table
Transient Response			4	% deviation	Recovery within <1% within 500 µs for a 60% step load change at 0.15 A/µs
Ripple & Noise			150	mV pk-pk	Measured with 20 MHz bandwidth and 10 µF electrolytic in parallel with 0.1 µF ceramic capacitor
Short Circuit Protection					Continuous, trip and restart (hiccup mode) with auto recovery
Temperature Coefficient			0.05	%/°C	

### General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		85		%	Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 115 VAC input
Energy Efficiency					Level VI
Isolation	4000			VAC	Input to Output, 2 x MOPP
Leakage Current		30	100	µA	At 264 VAC, 60 Hz, from output to ground
Switching Frequency	24		70	kHz	Variable
Mean Time Between Failure	250			kHrs	MIL-HDBK-217F at 25 °C GB
Weight		0.18 (80)		lb (g)	Body only

### Environmental

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

### EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55032	Level B	
Radiated	EN55032	Level B	
Harmonic Current	EN61000-3-2	Class A	
Voltage Flicker	EN61000-3-3		

### EMC: Immunity

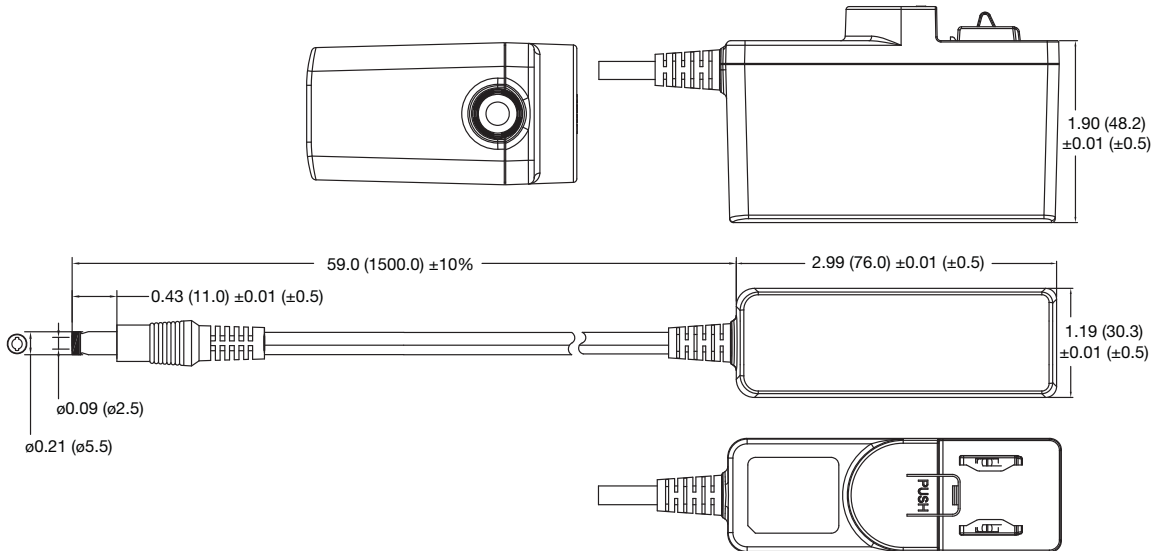
Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Medical Device EMC	IEC60601-1-2	Ed.4.0 : 2014	as below	
Low Voltage PSU EMC	EN61204-3		as below	
ESD Immunity	EN61000-4-2	±8 kV contact, ±15 kV air	A	
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	Level 3	A	
Surge	EN61000-4-5	Level 2	A	
Conducted Immunity	EN61000-4-6	3 V	A	
Magnetic Fields	EN61000-4-8	30 A/m	A	
Dips and Interruptions	EN61000-4-11	Dip: 100% 10 ms	B	
		Dip: 70% 500 ms	B	
		Int: 100% 5000 ms	B	
	EN60601-1-2	Dip: 30% 25 AC Cycles	A	
		Int: 100% 0.5 AC Cycle	B	At 8 angles
		Int: 100% 1 AC Cycle	B	
		Int.: >95% 5000 ms	B	

### Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
UL	UL60950-1	Information Technology
TUV	EN60950-1	
CB	IEC60950-1	
CE	LVD	
UL	ANSI/AAMI ES 60601-1	Medical, 2 x MOPP
CSA	CSA C22.2 No. 60601	
TUV	EN60601-1	
CB	IEC60601-1	

### Mechanical Details

#### ACM12USXX



#### AC Input Plugs

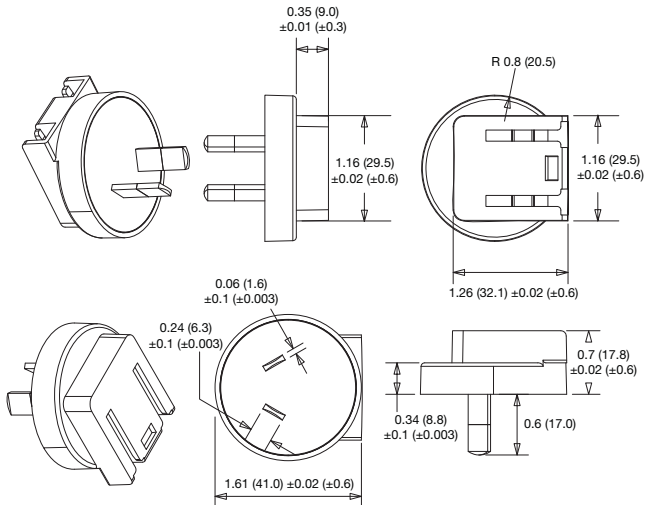
**Black UK Plug: ACM PLUG UK**  
**White UK Plug: ACM PLUG UK W**

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

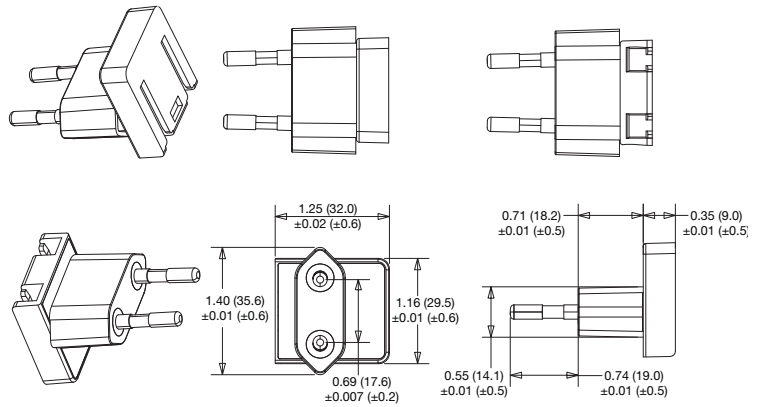


### AC Input Plugs

**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**

