

12W

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.

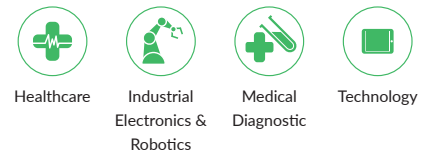
Available with a standard jack plug connector these adaptors suit a wide variety of cost sensitive medical (2 x MOPP) and ITE & industrial electronics applications while maintaining industry leading performance.



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



Dimensions

Body only:

2.99" x 1.19" x 1.90" (76.0 x 30.3 x 48.2mm)

Models & Ratings

| Model Number ^(1,2,5) | Output Voltage | Output Current | Total Regulation ⁽³⁾ | Efficiency ⁽⁴⁾ | Output Power |
|---------------------------------|----------------|----------------|---------------------------------|---------------------------|--------------|
| ACM12US05 | 5.0V | 2000mA | ±5% | 80.6% | 10W |
| ACM12US09 | 9.0V | 1330mA | | 84.2% | |
| ACM12US12 | 12.0V | 1000mA | | 85.2% | |
| ACM12US15 | 15.0V | 800mA | | 85.2% | 12W |
| ACM12US18 | 18.0V | 666mA | | 84.7% | |
| ACM12US24 | 24.0V | 500mA | | 85.7% | |

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 115 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 | |
| Power Factor | | | | | EN61000-3-2 class A |
| Input Current | | | 0.5 | A | 230VAC |
| 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 & Ratings |
| Minimum Load | No minimum load required | | | | |
| Start Up Delay | | | 4 | s | |
| Start Up Rise Time | | 120 | | ms | |
| Hold Up Time | 10 | | | ms | Full load and 100VAC |
| Total Regulation | | | 5 | % | See Models & Ratings |
| 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 | | 85 | | % | 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 | | 0.26 (120) | | 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 | |
| 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 |

EMC: 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

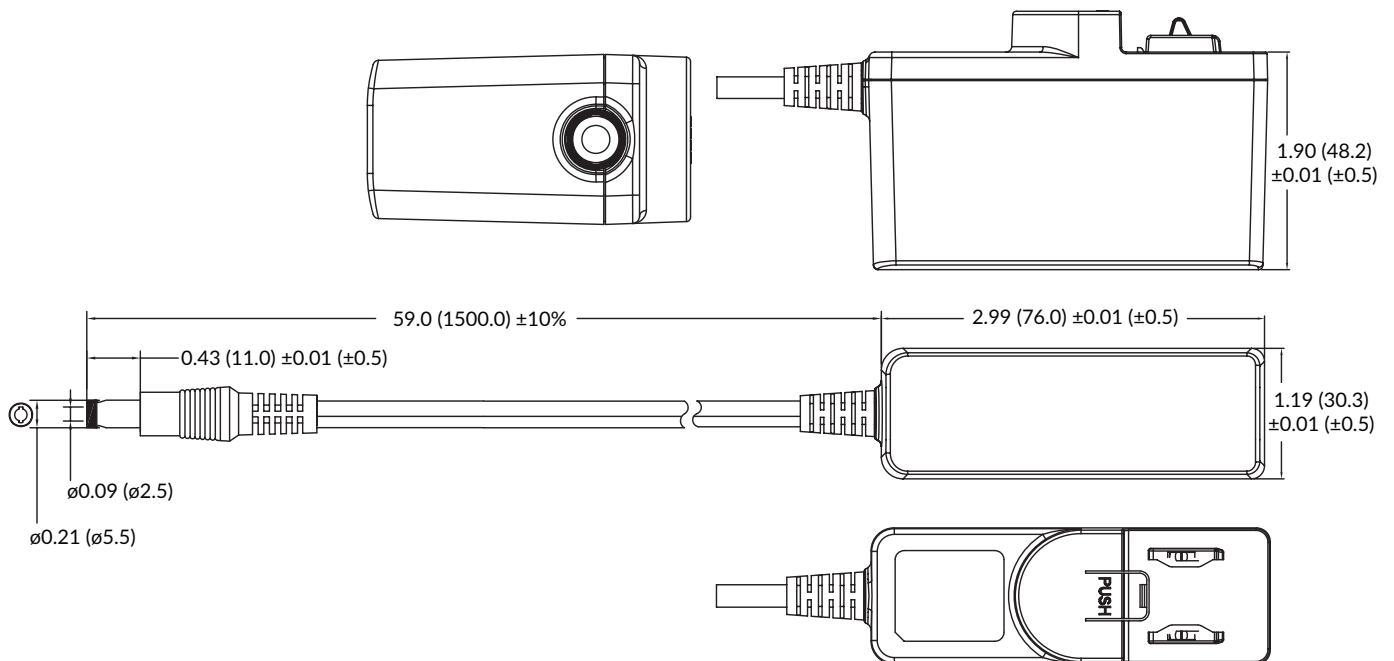
| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------------------|--------------|-------------------------|----------|--------------------|
| Medical Device EMC | IEC60601-1-2 | Ed.4.0 : 2014 | as below | |
| Low Voltage PSU EMC | EN61204-3 | High severity level | as below | |
| 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 | 3V | 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 | At 8 angles |
| | | Int: 100% 0.5 AC Cycle | A | |
| | | Int: 100% 1 AC Cycle | B | |
| | | Int: >95% 5000ms | B | |

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

ACM12USXX

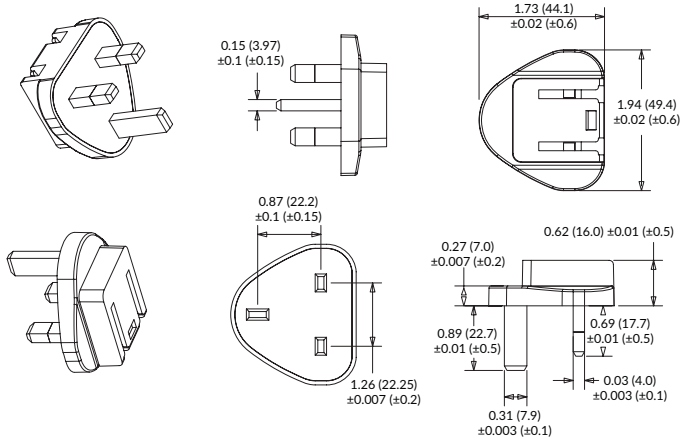


Mechanical Details

AC Input Plugs

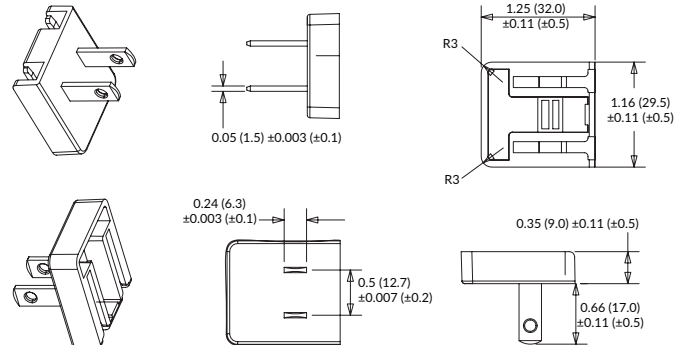
Black UK Plug: ACM PLUG UK

White UK Plug: ACM PLUG UK W



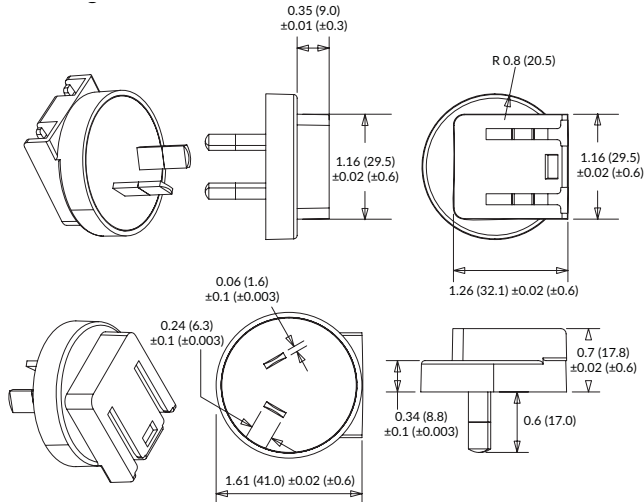
Black USA Plug: ACM PLUG US

White USA Plug: ACM PLUG US W



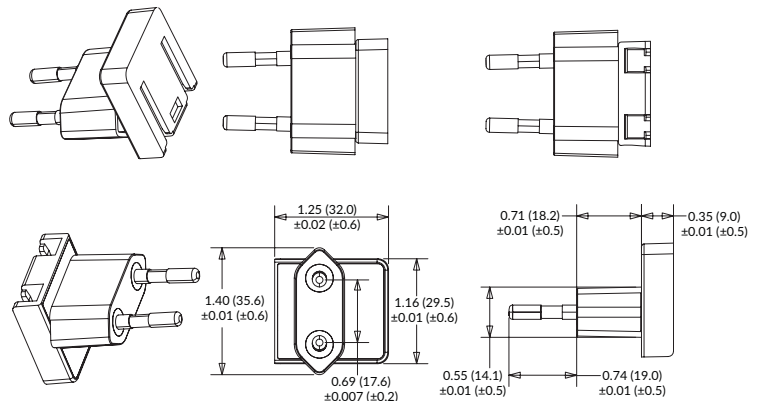
Black Australian Plug: ACM PLUG AU

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

