

24W EXTERNAL WALL PLUG

AC-DC POWER SUPPLIES

The AMF24 series of wall plug adaptors comply with medical and home-healthcare approvals along with the latest energy efficiency level VI standards with high active mode efficiency and extremely low no load power consumption.

Available with a range of interchangeable AC connectors these adaptors suit a wide variety of cost sensitive industrial and medical applications while maintaining industry leading performance.



Features

- IP22 ingress protection
- IEC/EN60601-1-11 for home healthcare applications
- Energy efficiency level VI & EU2019/1782
- Medical and home healthcare approvals
- Interchangeable mains connectors
- Input voltage range 80 to 264VAC
- Output voltages from 9V to 48VDC
- Optional white versions
- Class II construction
- 3 Years warranty

Applications



Healthcare



Home Healthcare



Medical Diagnostic

Dimensions

3.56" x 1.32" x 2.3" (90.5 x 33.5 x 58.5mm)

Models & Ratings

| Model Number ^(1,2,5) | Output Power | Output Voltage | Output Current | Total Regulation ⁽³⁾ | Efficiency ⁽⁴⁾ |
|---------------------------------|--------------|----------------|----------------|---------------------------------|---------------------------|
| AMF24US09 | 24W | 9.0V | 2330mA | 5% | 86.4% |
| AMF24US12 | | 12.0V | 2000mA | | 87.9% |
| AMF24US15 | | 15.0V | 1600mA | | 87.3% |
| AMF24US18 | | 18.0V | 1330mA | | 88.6% |
| AMF24US24 | | 24.0V | 1000mA | | 88.8% |
| AMF24US48 | | 48.0V | 500mA | | 88.3% |

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 230VAC.
5. For white case version add suffix '-W' e.g. AMF24US12-W. MOQ applies, contact sales for details.

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|---------------------|-----------------------|---------|---------|-------|----------------------------|
| Input Voltage | 80 | | 264 | VAC | |
| Input Frequency | 47 | | 63 | Hz | |
| Input Current | | | 0.6 | A | Measured at 80VAC |
| Inrush Current | | | 70 | A | 240VAC, cold start at 25°C |
| Power Factor | EN61000-3-2, class A | | | | |
| No Load Input Power | | | 75 | mW | |
| Input Protection | Internal fuse in line | | | | |

Output

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-------------------------|---------|---------|---------|-------------|--|
| Output Voltage | 9 | | 48 | V | See Models and Ratings table |
| Minimum Load | 0 | | | A | No minimum load required |
| Start Up Delay | | | 4 | s | |
| Start Up Rise Time | 10 | | 40 | 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 | | | 200 | mV pk-pk | Measured with 20MHz bandwidth and 10µF electrolytic in parallel with 0.1µF ceramic capacitor |
| Over Voltage Protection | 110 | | 200 | % | Auto recovery |
| Over Load Protection | 115 | | 180 | % | |
| Leakage Current | | | 50 | µA | At 264VAC, 60Hz, from output to ground |
| Temperature Coefficient | | | 0.05 | %/°C | |

General

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|---------------------------|---------|------------|---------|--------|--|
| Efficiency | | 88 | | % | Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 230VAC input |
| Energy Efficiency | | | | | Level VI |
| Isolation | 4000 | | | VAC | Input to Output, 2 x MOPP Suitable for BF applications |
| Switching Frequency | 24 | | 80 | kHz | Variable |
| Mean Time Between Failure | 200 | | | khrs | MIL-HDBK-217F at 25°C GB |
| Weight | | 0.37 (170) | | lb (g) | Body only |

Environmental

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|--|---------|---------|-------|---|
| Operating Temperature | 0 | | +60 | °C | Derate from 100% load at 45°C to 50% load at 60°C. Agency approval to 45°C max. |
| Storage Temperature | -20 | | +85 | °C | |
| Operating Humidity | | | 90 | %RH | Non-condensing |
| Operating Altitude | | | 5000 | m | |
| Vibration | 10 | | 300 | Hz | 2g, 0.3 decades/min, 15 mins for each of 3 axes |
| Cooling | Natural convection | | | | |
| Shock | 1m drop onto concrete on each of 6 axes, non operating | | | | |

EMC: Emissions

| Phenomenon | Standard | Test Level | Notes & Conditions |
|------------------|-------------|------------|------------------------|
| Emissions | EN55011 | Level B | Conducted and radiated |
| Harmonic Current | EN61000-3-2 | Class A | |
| Voltage Flicker | EN61000-3-3 | | |

EMC: Immunity

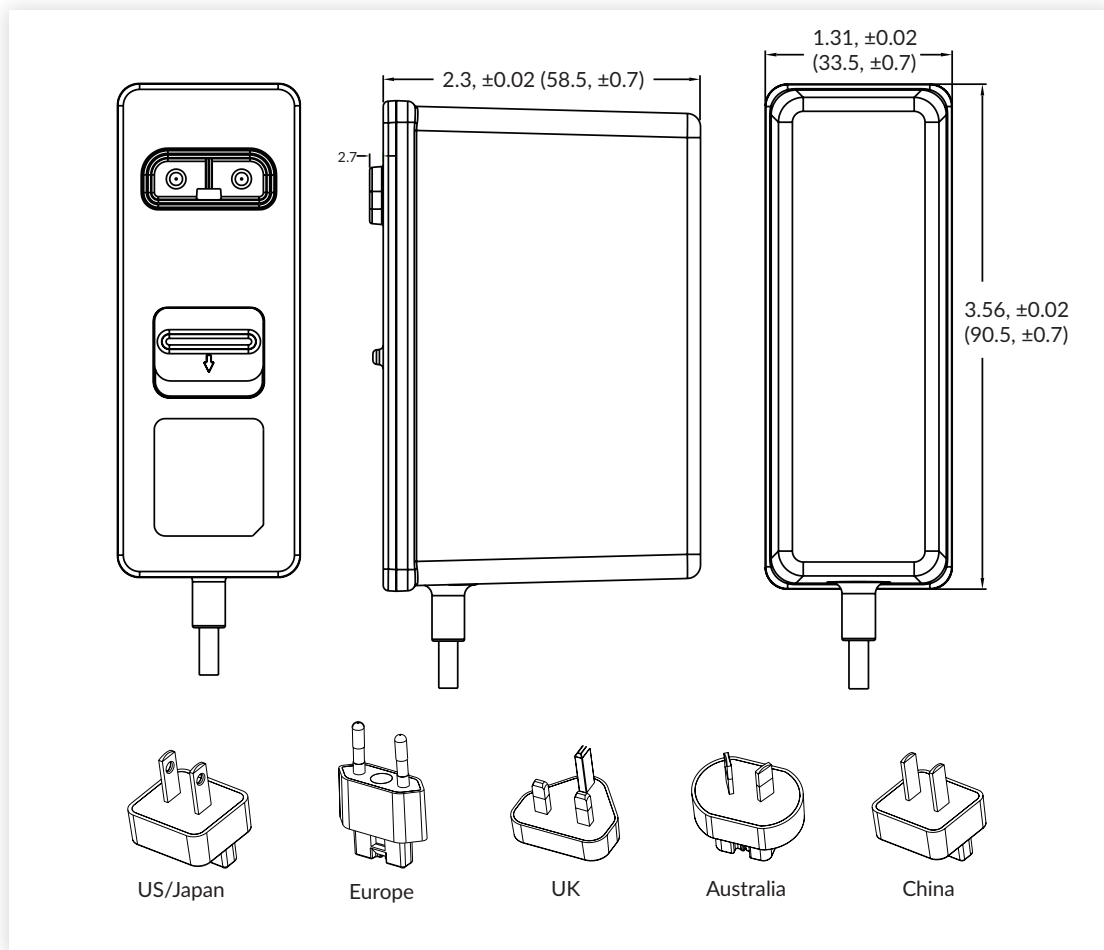
| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------------------|--------------|-------------------------|----------|--|
| Medical Device EMC | IEC60601-1-2 | Ed.4.0 : 2014 | as below | |
| ESD Immunity | EN61000-4-2 | ±8kV contact, ±15 V air | A | |
| Radiated Immunity | EN61000-4-3 | 10 V/m | A | 80 to 2700mHz, IEC60601-1-2 Ed. 4.0 at other frequencies |
| EFT/Burst | EN61000-4-4 | Level 3 | A | |
| Surge | EN61000-4-5 | Level 3 | A | |
| Conducted Immunity | EN61000-4-6 | 6V | A | |
| Magnetic Fields | EN61000-4-8 | 30A/m | A | |
| Dips and Interruptions | EN60601-1-2 | Dip: 30% 25 AC Cycles | A/B | High Line/Low Line |
| | | Int: 100% 0.5 AC Cycle | A | At 8 angles |
| | | Int: 100% 1 AC Cycle | B | |
| | | Int.: >95% 5000ms | B | |

Safety Approvals

| Certification | Safety Standard | Notes & Conditions |
|---------------|----------------------------------|------------------------|
| UL | ANSI/AAMI ES60601-1 | Medical, 2 x MOPP |
| EN | EN62368-1 | Information Technology |
| | EN60601-1, EN60601-1-11 | Medical, 2 x MOPP |
| CB | IEC60601-1, IEC60601-1-11 | Medical, 2 x MOPP |
| CSA | CSA C22.2 No. 60601 | Medical, 2 x MOPP |
| CE | Meets all applicable directives | |
| UKCA | Meets all applicable legislation | |

Mechanical Details

AMF24USXX



Notes:

1. All dimensions shown in inches (mm). Tolerance: ± 0.02 (± 0.7)
2. Weight: 0.37lb (170g)

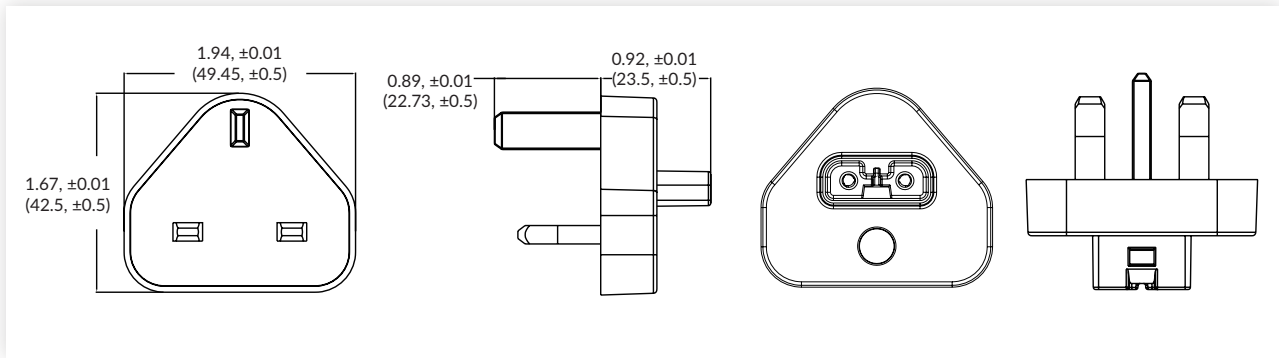
3. Output plug: barrel jack connector, $\phi 5.5 \times \phi 2.5 \times 11.0$ mm, centre positive
4. Output lead: UL2468, 18AWG

Mechanical Details

AC Input Plugs

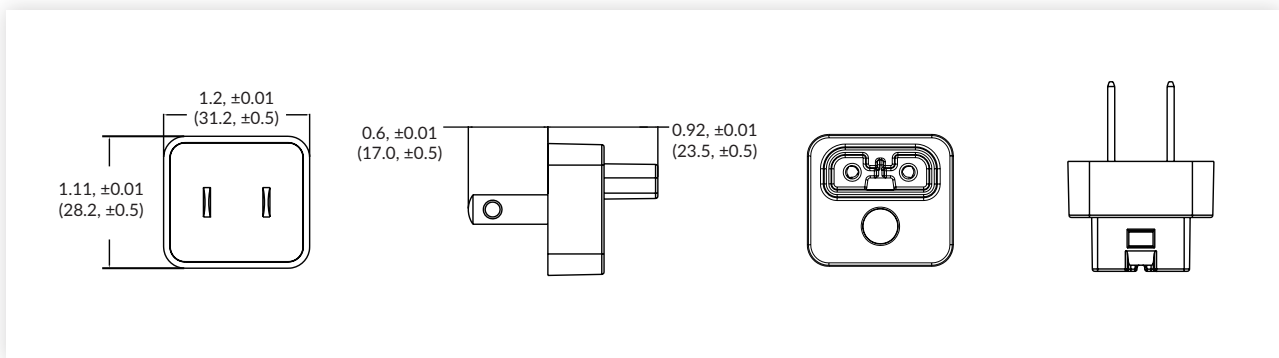
Black UK Plug: AMF PLUG UK

White UK Plug: AMF PLUG UK W



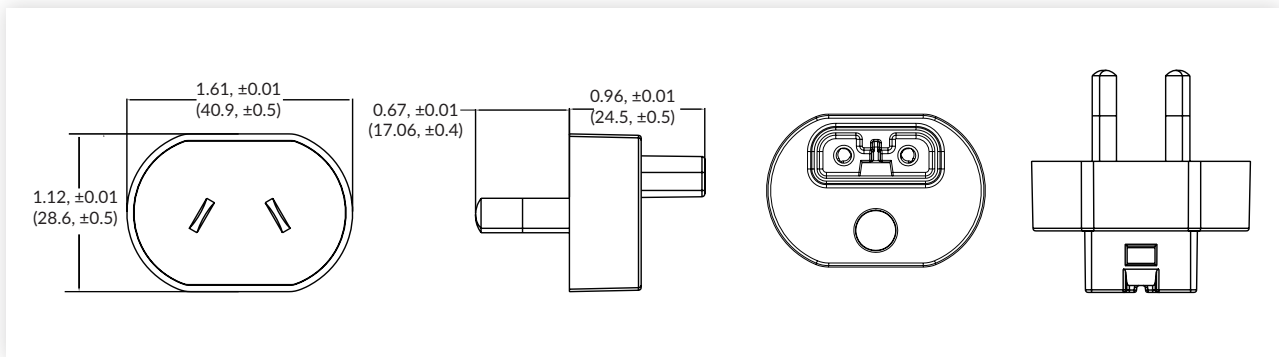
Black USA Plug: AMF PLUG US

White USA Plug: AMF PLUG US W



Black Australian Plug: AMF PLUG AU

White Australian Plug: AMF PLUG AU W

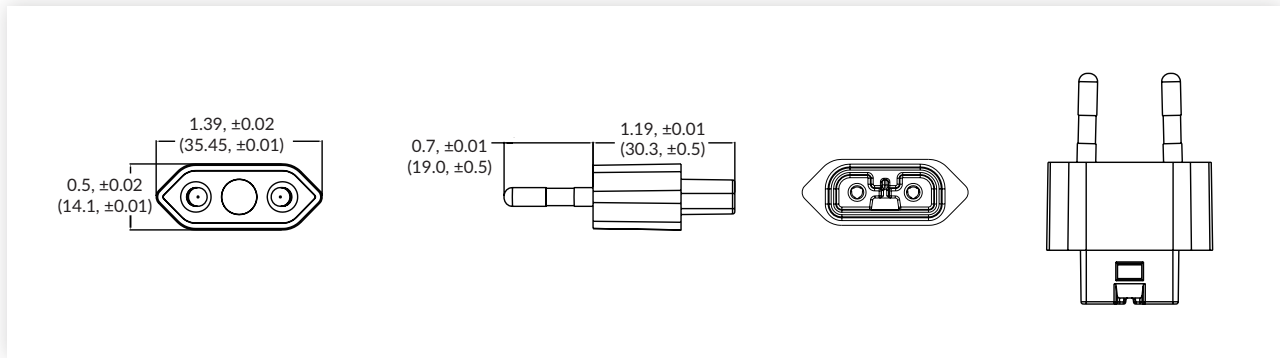


Mechanical Details

AC Input Plugs

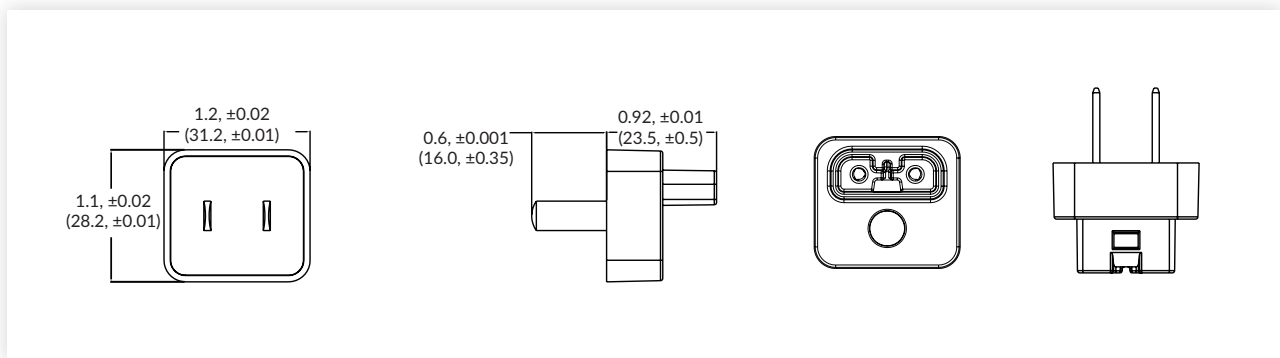
Black European Plug: AMF PLUG EU

White European Plug: AMF PLUG EU W



Black China Plug: AMF PLUG CN

White China Plug: AMF PLUG CN W



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[XP Power:](#)

[AMF24US09](#) [AMF24US12](#) [AMF24US24](#)