

## 18W EXTERNAL WALL PLUG

AC-DC  
power supplies 

The AMF18 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 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 voltages range 80 to 264VAC
- ▶ Output voltages from 5V to 24VDC
- ▶ Optional white version
- ▶ Class II construction
- ▶ 3 year warranty

### Applications



Healthcare



Home  
Healthcare



Medical  
Diagnostics

### Dimensions

90.5 x 58.5 x 33.5mm (3.56" x 2.30" x 1.32")

### Models & ratings

| Model number <sup>(1,2,5)</sup> | Output power | Output voltage | Output current | Total regulation <sup>(3)</sup> | Efficiency <sup>(4)</sup> |
|---------------------------------|--------------|----------------|----------------|---------------------------------|---------------------------|
| AMF18US05                       | 18W          | 5.0VDC         | 2500mA         | 5%                              | 82.5%                     |
| AMF18US09                       |              | 9.0VDC         | 2000mA         |                                 | 86.5%                     |
| AMF18US12                       |              | 12.0VDC        | 1500mA         |                                 | 87.8%                     |
| AMF18US15                       |              | 15.0VDC        | 1200mA         |                                 | 86.7%                     |
| AMF18US18                       |              | 19.0VDC        | 1000mA         |                                 | 87.2%                     |
| AMF18US24                       |              | 24.0VDC        | 750mA          |                                 | 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. AMF18US12-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       |                       |         | 0.5     | A     | Measured at 80VAC        |
| Inrush current      |                       |         | 70      | A     | 240VAC cold start, +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          | 5                        |         | 24      | VDC         | See models and ratings table                                                                 |
| Minimum load            | No minimum load required |         |         |             |                                                                                              |
| Start up delay          |                          |         | 4       | s           |                                                                                              |
| Start up rise time      |                          | 15      | 45      | 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 and noise        |                          |         | 200     | mV pk-pk    | Measured with 20MHz bandwidth and 10μF electrolytic in parallel with 0.1μF ceramic capacitor |
| Overvoltage protection  | 110                      |         | 200     | %           | Auto recovery                                                                                |
| Over load protection    | 120                      |         | 205     | %           |                                                                                              |
| 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<br>Suitable for BF applications                                |
| Switching frequency       | 24       |            | 70      | kHz    | Variable                                                                                 |
| Mean time between failure | 200      |            |         | khrs   | MIL-HDBK-217F at +25°C GB                                                                |
| Weight                    |          | 160 (0.35) |         | g (lb) | Body only                                                                                |

## 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, agency approval to +40°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 3 axes                                       |
| Cooling               | Natural convection                                      |         |         |       |                                                                                    |
| Shock                 | 1m drop onto concrete on each of 3 sides, non operating |         |         |       |                                                                                    |

## EMC: Emissions

| Phenomenon        | Standard    | Test level | Notes & conditions     |
|-------------------|-------------|------------|------------------------|
| Emissions         | EN55011     | Level B    | Conducted and radiated |
| 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 |                                                          |
| ESD immunity           | EN61000-4-2  | ±8kV contact, ±15kV air | A        |                                                          |
| Radiated immunity      | EN61000-4-3  | 10V/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 2                 | 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        |                                                          |

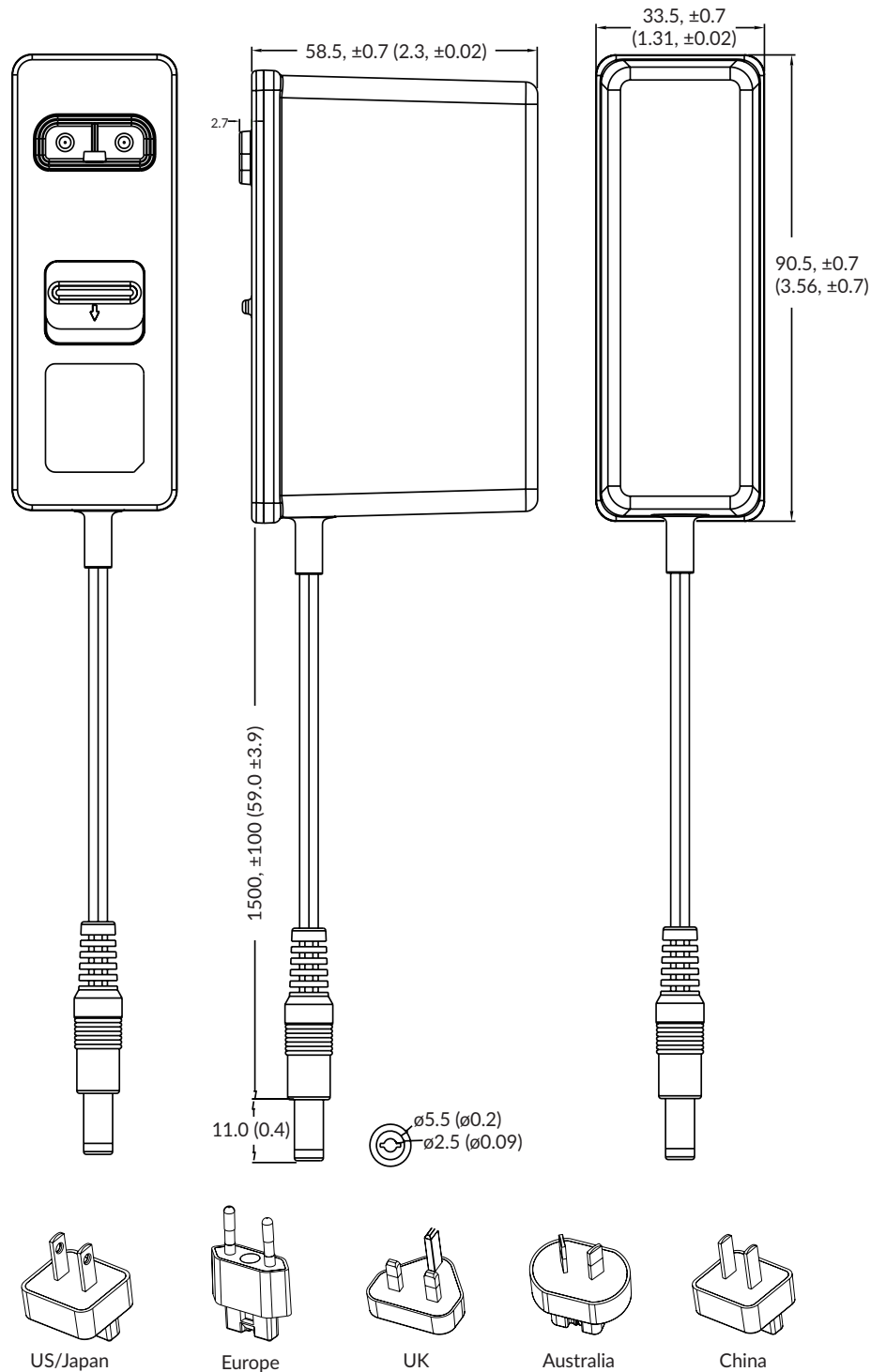
## Safety approvals

| 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 |                        |

# AMF18 series

## Mechanical details

AMF18USXX



### Notes:

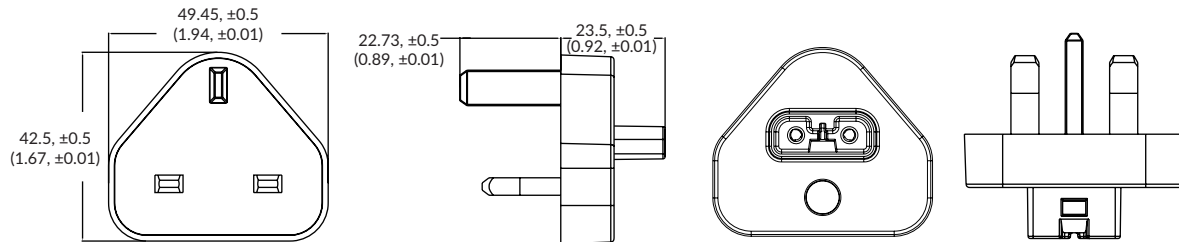
1. All dimensions shown in mm (inches). Tolerance: ±0.7 (±0.02)
2. Weight: 160g (0.35lb) approx.
3. Output plug barrel jack connector, 5.5 x 2.5 x 11.0mm, centre positive.
4. Output lead: UL2468, 18AWG

## Mechanical details

### AC Input Plugs

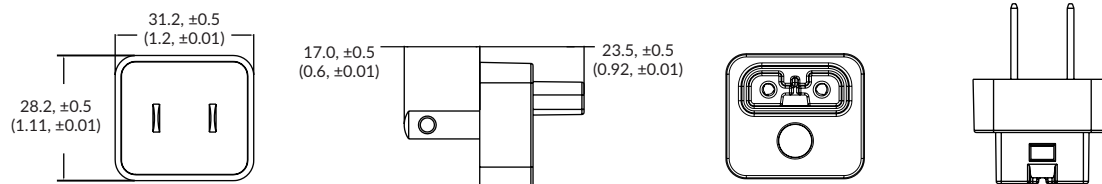
Black UK Plug: AMF PLUG UK

White UK Plug: AMF PLUG UK W



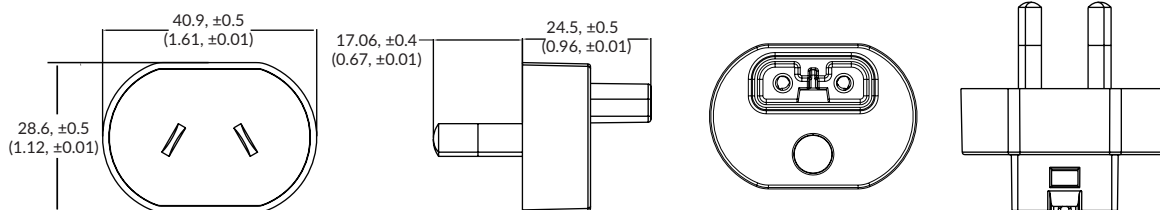
Black USA Plug: AMF PLUG US

White USA Plug: AMF PLUG US W



Black Australian Plug: AMF PLUG AU

White Australian Plug: AMF PLUG AU W

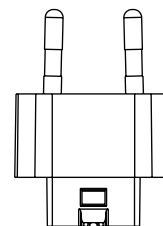
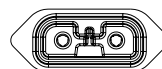
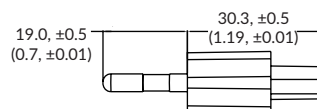
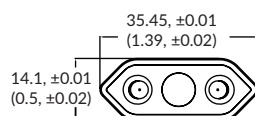


## Mechanical details

### 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

