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AMA5-Y



Wall Mount Adapter

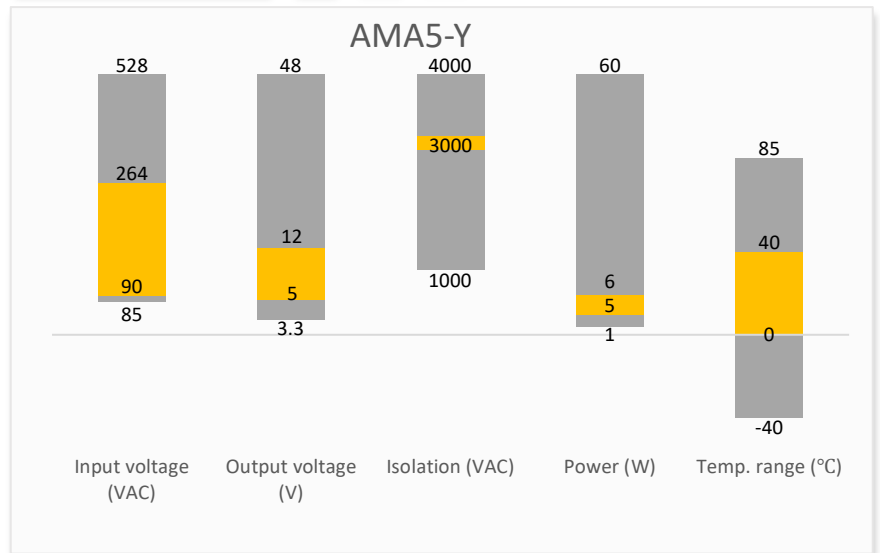
The AMA5-Y is a small industrial grade wall mount adapter offering a commercial input voltage range of 90-264VAC and an output power of 5W. This adapter will offer many benefits to powering your system such as low power consumption, high efficiency (complies with DoE level VI), meets IEC62368-1, FCC, Class B, CISPR22, Class B.

It also features an isolation of 3000VAC for improved reliability and system safety and comes standard with output short circuit protection (OSCP) and output over-current protection (OCP).

Features

- Universal Input: 90 - 264VAC/47 - 63Hz
- Operating Temp: 0 °C to +40 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 300mV(p-p), max
- Output short circuit, over-current protection
- Regulated Output

Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Portable Equipment

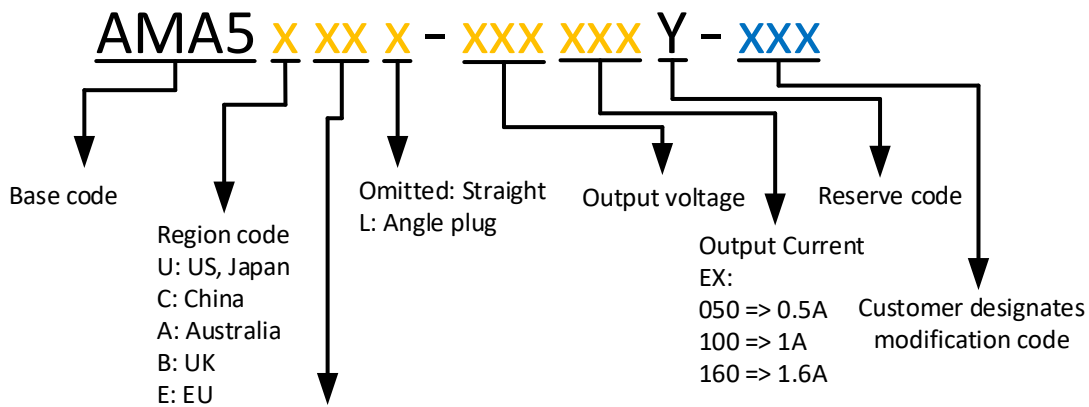


Industrial

Models & Specifications

| General Feature | | | | | |
|-----------------|---------------------|----------------------|------------------------|----------------------|----------------|
| Model | Input Voltage (VAC) | Output Voltage (VDC) | Output Current max (A) | Output Power max (W) | Efficiency (%) |
| AMA5U-033160Y | 90 - 264 | 3.3 | 1.6 | 5.28 | 74 |
| AMA5E-033160Y | 90 - 264 | 3.3 | 1.6 | 5.28 | 74 |
| AMA5U-050100Y | 90 - 264 | 5 | 1 | 5 | 73 |
| AMA5E-050100Y | 90 - 264 | 5 | 1 | 5 | 73 |
| AMA5U-120050Y | 90 - 264 | 12 | 0.5 | 6 | 75 |
| AMA5E-120050Y | 90 - 264 | 12 | 0.5 | 6 | 75 |

Please refer to below coding rule for completed part numbers. Eg. AMA5**URS**-050100Y for industrial grade adaptor with US wall plug which comes with 5.5mm*2.5mm*9.5mm straight standard output plug.



| Plug type | Code | O. D. | I. D. | Length |
|-----------|------|---|--------|--------|
| Standard | R1 | 3.5mm | 1.35mm | 9.5mm |
| | R2 | 3.8mm | 1.05mm | 9.5mm |
| | R3 | 3.8mm | 1.35mm | 9.5mm |
| | R4 | 5.5mm | 2.1mm | 9.5mm |
| | R5 | 5.5mm | 2.5mm | 9.5mm |
| Locking | K1 | 5.5mm | 2.1mm | 9.5mm |
| | K2 | 5.5mm | 2.5mm | 9.5mm |
| USB | U1 | Micro USB (5V output model only) | | |
| | U2 | * USB type C (For 5V, 12V output models only) | | |
| | U3 | USB type-A female port embedded in the adapter body (no external wires) | | |
| | U4 | Mini USB (5V output model only) | | |

* NOTE: The USB type C connector option is only a physical USB type-C connector which does not support PD and programmable power supply.

| Input Specification | | | | | |
|---------------------|--------------------|---------|-----------|---------|-------|
| Parameters | Conditions | Minimum | Typical | Maximum | Units |
| Voltage range | | 90 | 100 - 240 | 264 | VAC |
| Frequency | | 47 | 50 - 60 | 63 | Hz |
| Input current | Vin at 100 -240VAC | | | 0.2 | A |
| Inrush current | Vin at 240VAC | | | 50 | A |
| Leakage current | 120VAC/50Hz | | | 0.25 | mA |

| Output Specification | | | | | |
|----------------------|-------------------------------|---------|---------|---------|-------|
| Parameters | Conditions | Minimum | Typical | Maximum | Units |
| Output voltage | 5VDC output | | 5 | | VDC |
| | 12VDC output | | 12 | | |
| Output current | 5VDC output | 0 | | 1 | A |
| | 12VDC output | 0 | | 0.5 | |
| Voltage regulation | | | | ±10 | % |
| Ripple and Noise | 20 MHz bandwidth | | | 300 | mVp-p |
| Start-up time | Full load, Vin at 115VAC/60Hz | | | 3 | S |
| Hold-up time | 90% load, Vin at 115VAC/60Hz | 10 | | | mS |

Ripple and Noise are measured at 20MHz bandwidth by using a 0.1uF (M/C) and 10uF (E/C) parallel capacitor.

| Isolation Specifications | | | | |
|--------------------------|--------------------------------|---------|-------|-------|
| Parameters | Conditions | Typical | Rated | Units |
| Tested I/O voltage | 60 sec, leakage current < 10mA | | 3000 | VAC |

| General Specification | | | | | |
|--------------------------|--------------------------------------|---|---------|---------|-------|
| Parameters | Conditions | Minimum | Typical | Maximum | Units |
| Operating temperature | | 0 | | 40 | °C |
| Storage temperature | | -20 | | 70 | °C |
| | At active average mode 3.3VDC output | 74 | | | |
| Efficiency | At active average mode 5VDC output | 73.6 | | | % |
| | At active average mode 12VDC output | 75.2 | | | |
| Power consumption | Vin at 100 -240VAC, no load | | | 100 | mW |
| Humidity | Non-condensing | 20 | | 90 | % RH |
| Altitude | | 0 | | 2000 | m |
| DOE LEVEL | | VI | | | |
| Short circuit protection | | Continuous, auto recovery | | | |
| Over current protection | | Continuous, auto recovery | | | |
| Dimensions (L x W x H) | US | 2.52 x 1.03 x 2.40 inches (64.00 x 26.20 x 61.00mm) | | | |
| | EU | 2.52 x 1.01 x 2.96 inches (64.00 x 25.60 x 75.30mm) | | | |
| Cord length | | 59.06 inches (1500mm) | | | |
| MTBF | | > 175 000 hrs (Telcordia SR332, t=+25°C)/Full Load | | | |

All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

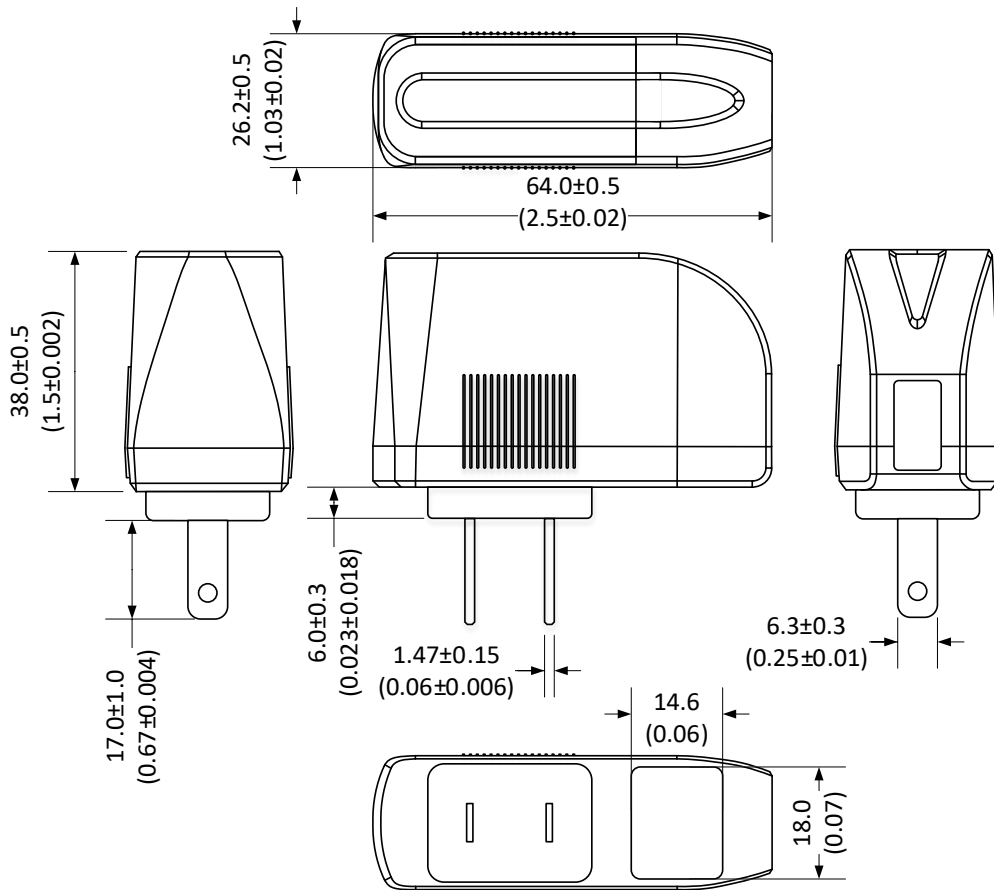
Safety Specifications

Parameters

| | | |
|-----------------|-------------------------------------|----------------------------------|
| Agency approval | cULus UL62368-1; CE EN62368-1 | |
| Standards | Information technology Equipment | Design to meet IEC 62368-1 |
| | EMC - Radiated & Conducted emission | FCC, Class B CISPR22, Class B |

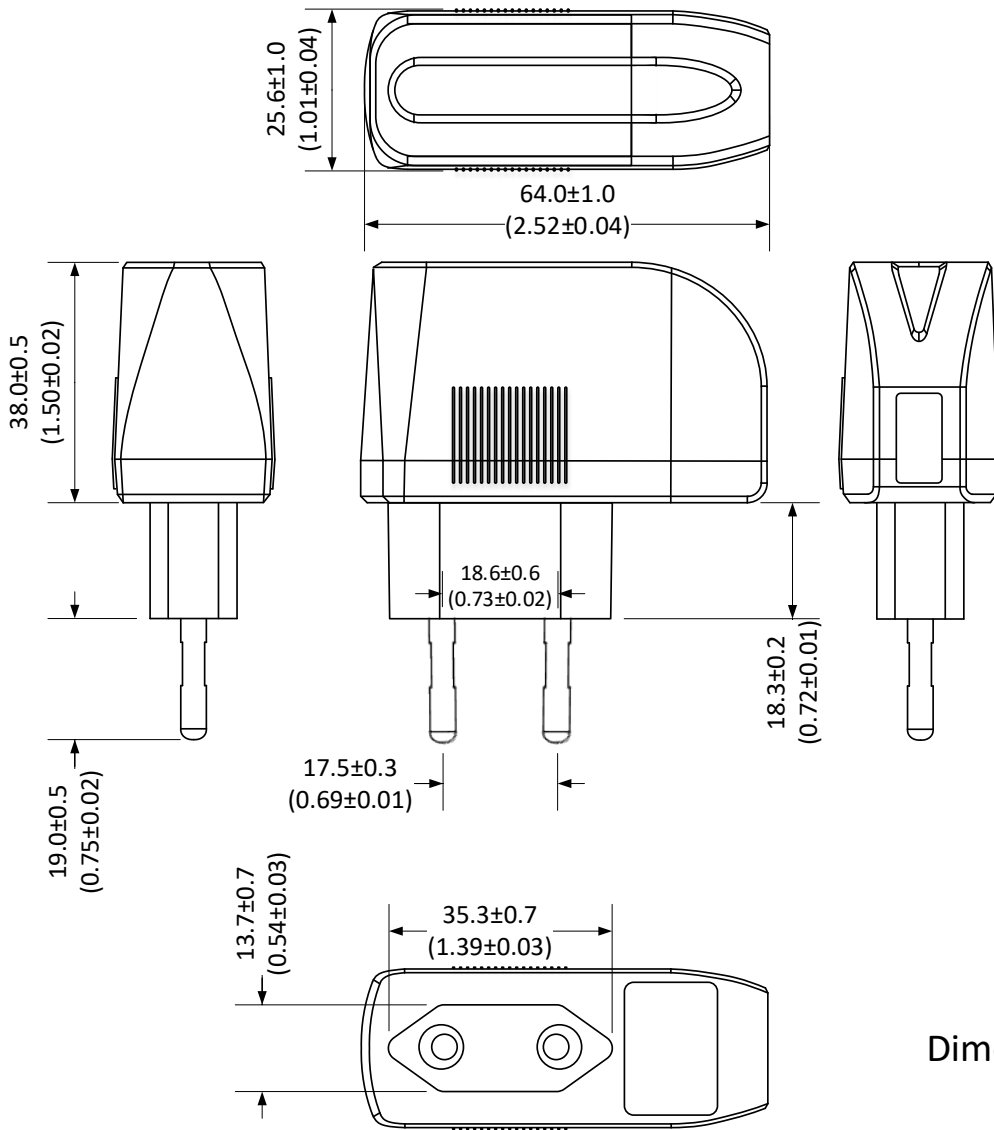
Dimensions

US Plug with U3 USB type A female port:



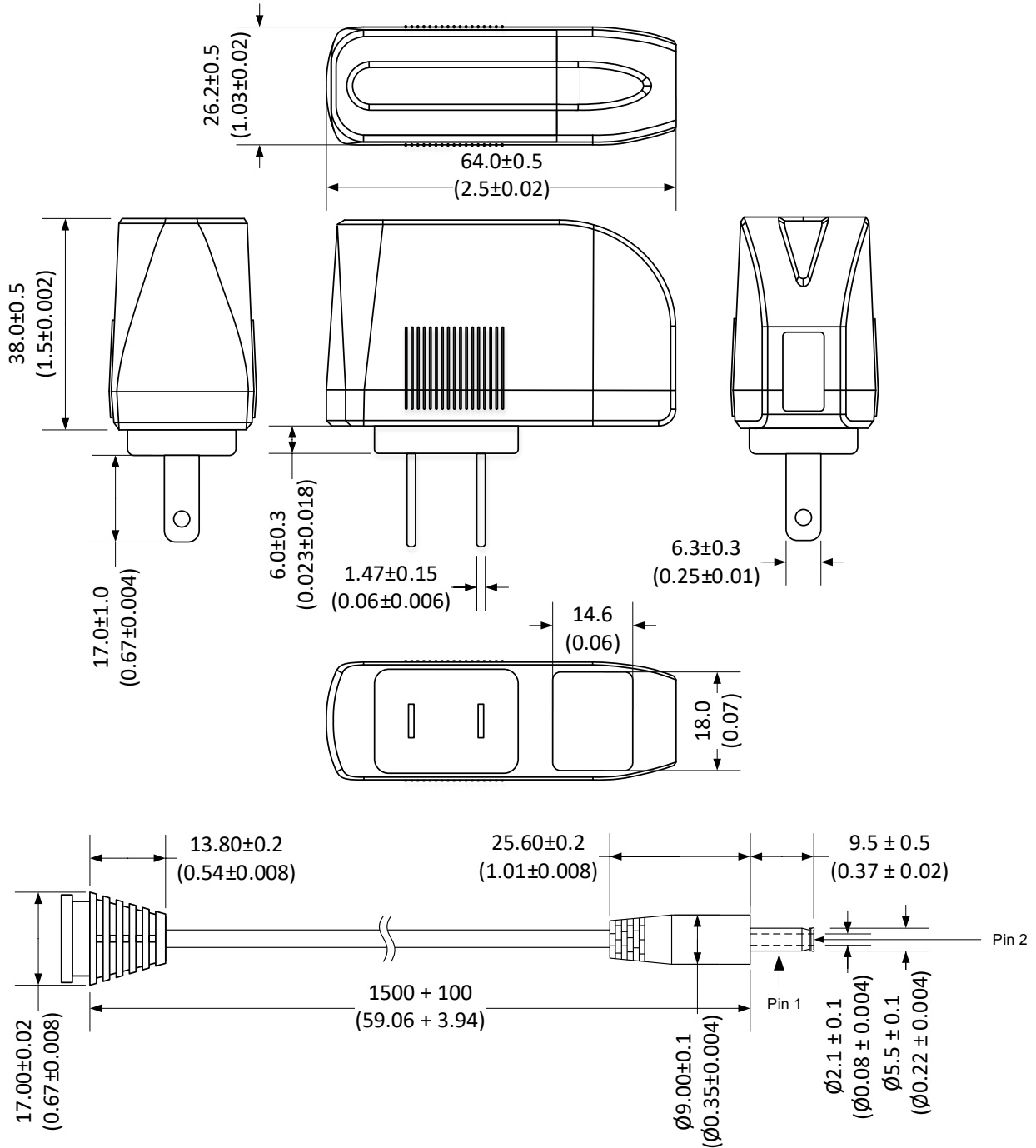
Dimensions mm(inch).

European Plug with U3 USB type A female port:



Dimensions mm(inch).

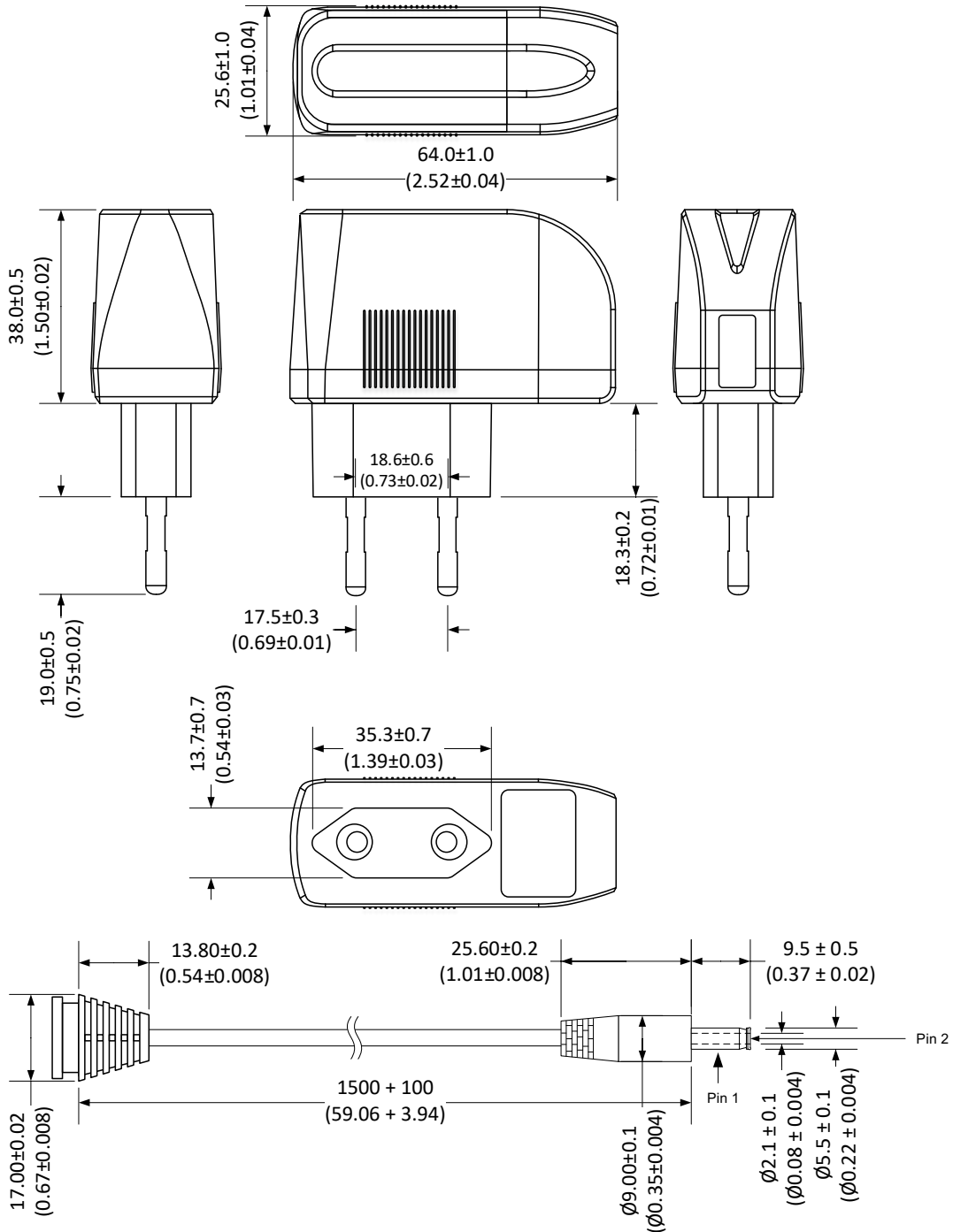
US Plug with R4 standard barrel plug:



Dimensions mm(inch).

| Pin Output Specifications | |
|---------------------------|--------------|
| Pin | Output Level |
| 1 | RTN(-) |
| 2 | +Vout |

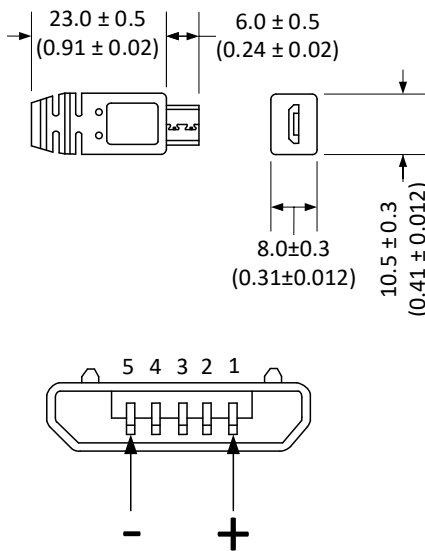
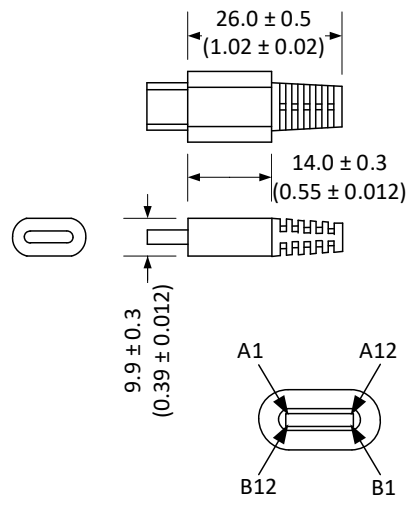
European Plug with R4 standard barrel plug:



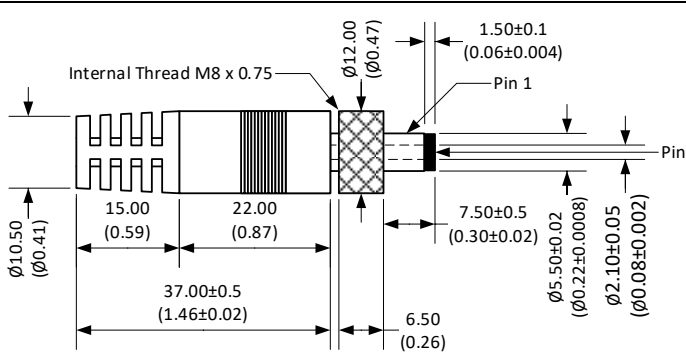
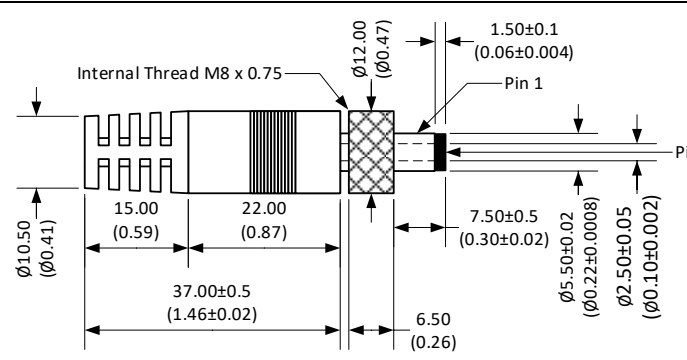
Dimensions mm(inch).

| Pin Output Specifications | |
|---------------------------|--------------|
| Pin | Output Level |
| 1 | RTN(-) |
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Optional USB Connector:

| Micro USB Connector | USB TYPE-C Connector | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|---------|-------------|---|-------|---|---------|---|---------|---|---------|---|--------|--|------------------------|--|---------|-------------|----------------|-------|------------------|--------|--------|---------|
|  <p>Dimensions: 23.0 ± 0.5 (0.91 ± 0.02), 6.0 ± 0.5 (0.24 ± 0.02), 8.0 ± 0.3 (0.31 ± 0.012), 10.5 ± 0.3 (0.41 ± 0.012)</p> <p>Pinout: 5, 4, 3, 2, 1. Pins 1 and 5 are labeled with '-' and '+' respectively.</p> |  <p>Dimensions: 26.0 ± 0.5 (1.02 ± 0.02), 14.0 ± 0.3 (0.55 ± 0.012), 9.9 ± 0.3 (0.39 ± 0.012)</p> <p>Pinout: A1, A12, B12, B1</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="2">Pin Out Configurations</th> </tr> <tr> <th>Pin No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+Vout</td> </tr> <tr> <td>2</td> <td>Omitted</td> </tr> <tr> <td>3</td> <td>Omitted</td> </tr> <tr> <td>4</td> <td>Omitted</td> </tr> <tr> <td>5</td> <td>RTN(-)</td> </tr> </tbody> </table> | Pin Out Configurations | | Pin No. | Description | 1 | +Vout | 2 | Omitted | 3 | Omitted | 4 | Omitted | 5 | RTN(-) | <table border="1"> <thead> <tr> <th colspan="2">Pin Out Configurations</th> </tr> <tr> <th>Pin No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A4, A9, B4, B9</td> <td>+Vout</td> </tr> <tr> <td>A1, A12, B1, B12</td> <td>RTN(-)</td> </tr> <tr> <td>Others</td> <td>Omitted</td> </tr> </tbody> </table> | Pin Out Configurations | | Pin No. | Description | A4, A9, B4, B9 | +Vout | A1, A12, B1, B12 | RTN(-) | Others | Omitted |
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| 2 | Omitted | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Omitted | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Omitted | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | RTN(-) | | | | | | | | | | | | | | | | | | | | | | | | |
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| A1, A12, B1, B12 | RTN(-) | | | | | | | | | | | | | | | | | | | | | | | | |
| Others | Omitted | | | | | | | | | | | | | | | | | | | | | | | | |

Optional Barrel Locking Type Connector:

| K1 Connector | K2 Connector | | | | | | | | | | | | | | | | |
|--|--|--|---------|-------------|---|--------|---|-------|--|------------------------|--|---------|-------------|---|--------|---|-------|
|  <p>Dimensions: 15.00 (0.59), 22.00 (0.87), 37.00 ± 0.5 (1.46 ± 0.02), 6.50 (0.26), 7.50 ± 0.5 (0.30 ± 0.02), 1.50 ± 0.1 (0.06 ± 0.004), 10.50 (Ø0.41), Ø12.00 (Ø0.47), Ø5.50 ± 0.02 (Ø0.22 ± 0.0008), Ø2.10 ± 0.05 (Ø0.08 ± 0.002)</p> <p>Internal Thread M8 x 0.75</p> <p>Pin 1, Pin 2</p> |  <p>Dimensions: 15.00 (0.59), 22.00 (0.87), 37.00 ± 0.5 (1.46 ± 0.02), 6.50 (0.26), 7.50 ± 0.5 (0.30 ± 0.02), 1.50 ± 0.1 (0.06 ± 0.004), 10.50 (Ø0.41), Ø12.00 (Ø0.47), Ø5.50 ± 0.02 (Ø0.22 ± 0.0008), Ø2.50 ± 0.05 (Ø0.10 ± 0.002)</p> <p>Internal Thread M8 x 0.75</p> <p>Pin 1, Pin 2</p> | | | | | | | | | | | | | | | | |
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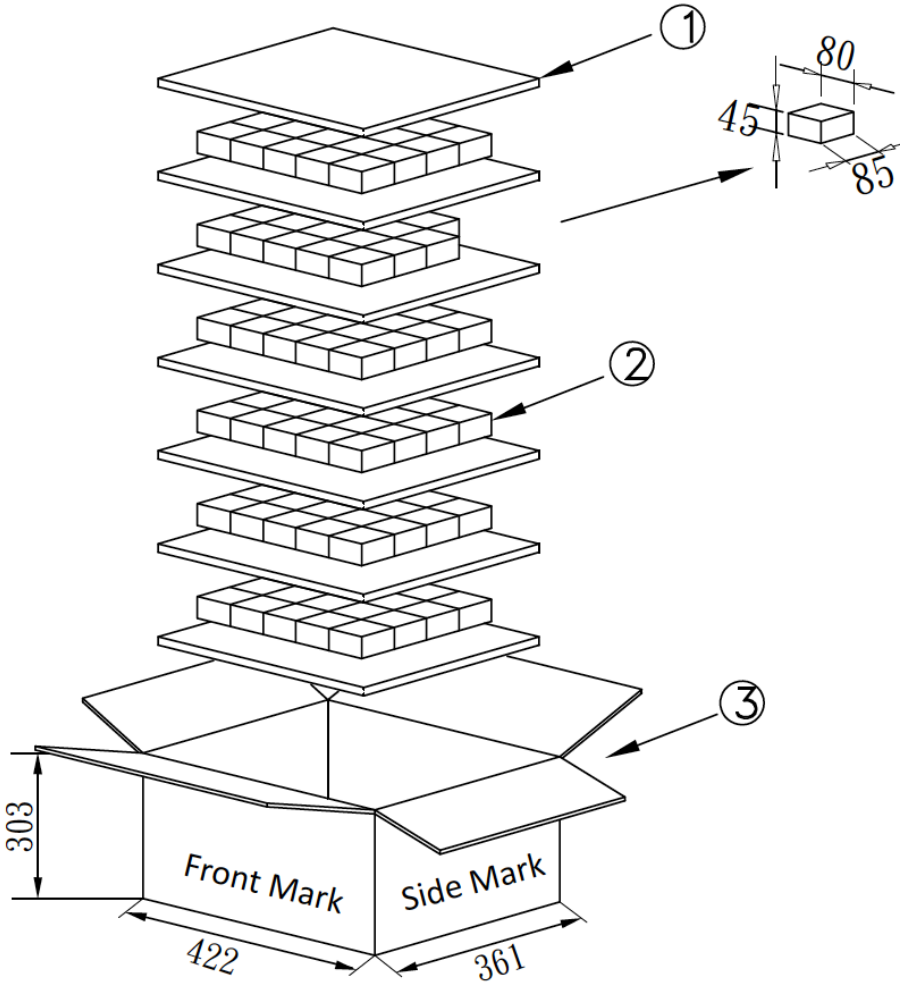
NOTE:

1. Micro USB connector: For 5V output model only, limited max output current of 3A.

2. USB TYPE-C connector: Limited maximum output voltage of 20V, and maximum output current of 5A.

Packing

For US and European plug



Packing information:

- CARTON:L*W*H=(422*361*303)+/-5mm
- CLAPBOARD:(400*340)+/-3mm B33 7PCS
- WHITE BOX:85*45*80 450P
- Q'TY:20*6=120PCS
- NET WEIGHT: (g)(ref)
- UNIT: mm

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