



## 12W Level VI Class II External medical power adapter —

**IEC 60601-1**



### ◆ Description:

The XJKMI12W Class II 12W external AC-DC medical power adapter is certified to comply with IEC 60601-1 safety standards for medical electrical equipment, ensuring high levels of safety and reliability for patient-connected devices. It is also designed to meet Level VI energy efficiency standards. With double insulation and no requirement for ground connection, it provides efficient and reliable power conversion, with off-load power consumption of less than 0.15W. This medical-grade power adapter is ideal for use in medical devices such as patient monitoring systems, diagnostic equipment, and other healthcare-related applications, ensuring safety and performance in critical environments..

### ◆ Features:

- Certified to IEC 60601-1 safety standard
- Meets Level VI energy efficiency requirements
- Class II double insulation, no ground needed
- Compact and lightweight design
- Low standby power consumption (<0.15W)
- Protection against over-voltage, over-current, and short circuit
- Wide operating temperature range
- Global regulatory compliance

### ◆ Application

- Medical devices such as patient monitoring systems, diagnostic equipment, and home healthcare devices
- Hospital and healthcare equipment, including portable and stationary devices
- Medical imaging systems and laboratory instruments
- Patient care and therapeutic devices, including infusion pumps and respiratory equipment
- Critical care devices requiring high reliability and safety standards

### ◆ Model Naming Convention:

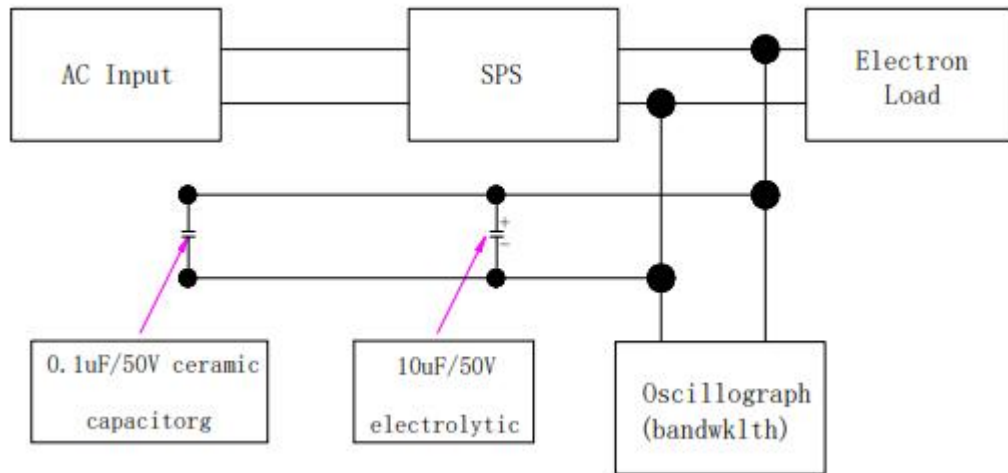
| <b>XJK</b> | <b>M</b>                                                   | <b>W</b>                                               | <b>6W</b>                                                                                       | <b>120</b>                                                                                                | <b>US</b>                                                                                 | <b>xxx</b>                                                          |
|------------|------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Our brand  | Series<br>:<br>M=ac adapter<br>M=Medical power supply..... | Type:<br>W=Wa<br>II plug<br>typeD<br>=Desk<br>top..... | Output power<br><br>6W=6w output power<br>36W=36w output power<br>45W=45w output power<br>..... | Output Voltage<br><br>050=5v output voltage<br>075=7.5v output voltage<br>120=12v output voltage<br>..... | Input<br><br>US= us plug<br>AU = Au plug<br>C8 = C8 inlet for desktop ac adapter<br>..... | Modified standard designator for alternative connectors, cables etc |

### ◆ Specification

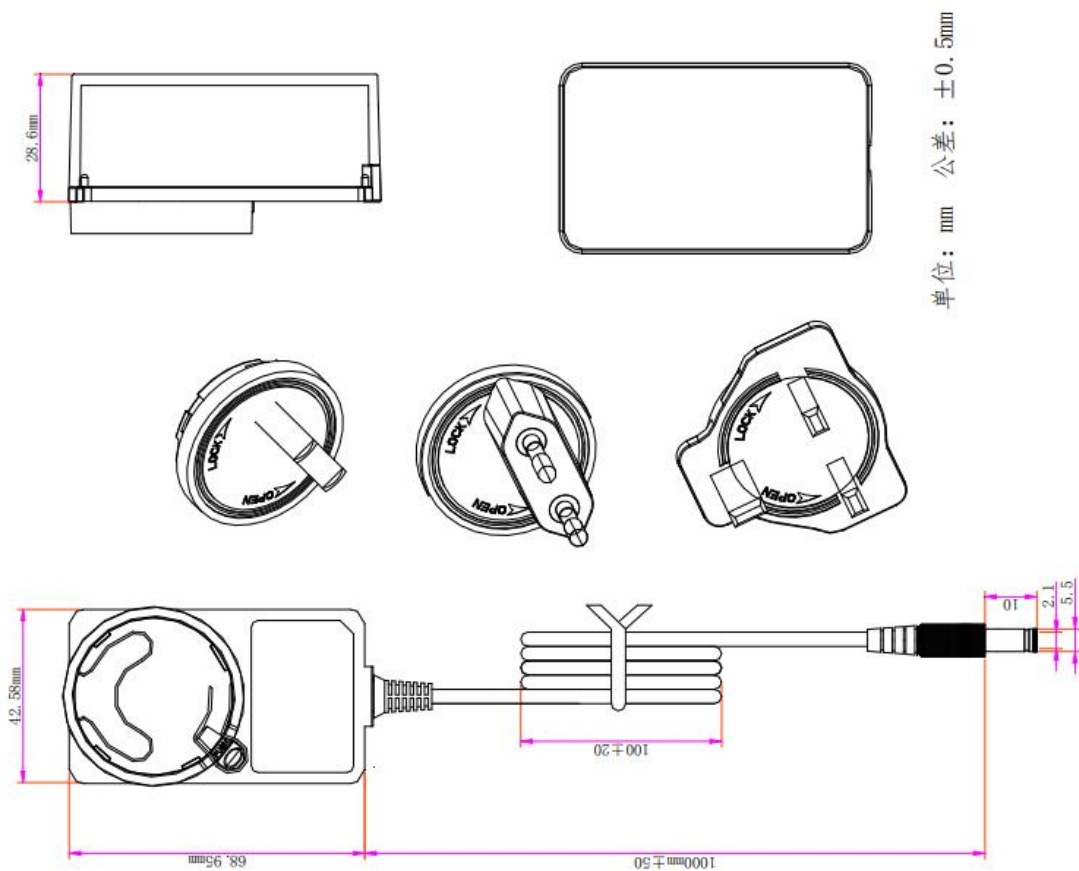
| Model   |                           | XJKMW12W<br>050XX-xxx                          | XJKMW12W0<br>90XX-xxx | XJKMW12W0<br>75XX-xxx | XJKMW6W0<br>90XX-xxx | XJKMW6W1<br>20XX-xxx |
|---------|---------------------------|------------------------------------------------|-----------------------|-----------------------|----------------------|----------------------|
| Output  | Rated Voltage             | 5V                                             | 9V                    | 12V                   | 15V                  | 24V                  |
|         | Rated Current             | 2.4 A                                          | 1.33A                 | 1.0A                  | 0.8A                 | 0.5A                 |
|         | Current Range             | 12W                                            | 12W                   | 12W                   | 12W                  | 12W                  |
|         | Rated Power               | 0.1-2.4A                                       | 0.1-1.33A             | 0.1-1.0A              | 0.1-0.8A             | 0.1-0.5A             |
|         | Voltage Accuracy          | ±2%(at 115/230Vac,60%load and 25°C ambient)    |                       |                       |                      |                      |
|         | Ripple&Noise              | 130mVp-p                                       | 130mVp-p              | 140mVp-p              | 150mVp-p             | 150mVp-p             |
| Input   | Voltage Range             | 80 ~ 264VAC                                    |                       |                       |                      |                      |
|         | Input Frequency           | 47 ~ 63Hz                                      |                       |                       |                      |                      |
|         | Input Current             | Max. 0.15A @ 100VAC / Max. 0.10A @ 230VAC      |                       |                       |                      |                      |
|         | No Load Power Consumption | < 0.1W @ 230VAC                                |                       |                       |                      |                      |
|         | Efficiency                | 82%                                            | 85%                   | 85%                   | 85%                  | 87%                  |
| Protect | Short Circuit             | Auto recovery after fault condition is removed |                       |                       |                      |                      |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tion         | Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                         |
|              | Over Current Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes (optional)                                                                                                                                                                                                                                                                                                                          |
|              | Over Voltage Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes (clamp or latch, optional)                                                                                                                                                                                                                                                                                                          |
| Environment  | Operating Temp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -10°C ~ +50°C                                                                                                                                                                                                                                                                                                                           |
|              | Storage Temp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -20°C ~ +85°C                                                                                                                                                                                                                                                                                                                           |
|              | Operating Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10% ~ 90% RH, non-condensing                                                                                                                                                                                                                                                                                                            |
|              | Storage Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5% ~ 95% RH, non-condensing                                                                                                                                                                                                                                                                                                             |
|              | Altitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ≤ 2000m                                                                                                                                                                                                                                                                                                                                 |
|              | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 100,000 hours @ 25°C, MIL-HDBK-217F                                                                                                                                                                                                                                                                                                     |
| Safety & EMC | Safety/EMC Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Complies with IEC 62368, EN 62368, UL 62368, GB 4943 safety standards. AC pins meet national standards (e.g., CE for EN 62368) and withstand 3000VAC.<br><br>Also meets EN 55032, EN 55035, and GB 9254-1998 (CISPR 32/35) for electromagnetic compatibility.<br><br>Note: AC plugs comply with corresponding national safety standards |
|              | DC Insulation Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Input to Output: ≥ 50MΩ (measured at 500VDC)<br>Input to Body Metal: ≥ 50MΩ (measured at 500VDC)                                                                                                                                                                                                                                        |
|              | High-Voltage Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Input to Output: 3000VAC, 5mA, 3 seconds minimum<br>Input to Body Metal: 1500VAC, 5mA, 3 seconds minimum                                                                                                                                                                                                                                |
|              | In-rush Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Maximum 30A cold start at 240VAC input, rated load, 25°C ambient                                                                                                                                                                                                                                                                        |
| Other        | Plug/Connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | See page 3~5; Other type available by customer requested                                                                                                                                                                                                                                                                                |
|              | Cable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | See page 3~5; Other type available by customer requested                                                                                                                                                                                                                                                                                |
|              | Dimension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | See page 3; Other type available by customer requested                                                                                                                                                                                                                                                                                  |
| Note         | <ol style="list-style-type: none"> <li>1. All specifications are measured at 230VAC input. 25°C ambient temperature, and full load unless otherwise specified.</li> <li>2. Ripple &amp; noise are measured with 20MHz bandwidth and using a 0.1μF ceramic capacitor and 47μF electrolytic capacitor in parallel across the output.</li> <li>3. Tolerance includes set up tolerance, line regulation, and load regulation.</li> <li>4. Specifications are subject to change without prior notice.</li> </ol> |                                                                                                                                                                                                                                                                                                                                         |

## ◆ Test Setup for Measurement

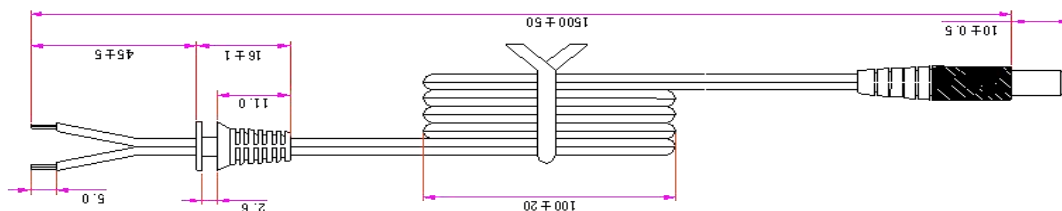


## ◆ Mechanical Specification

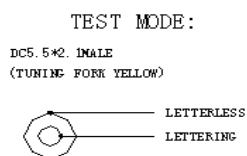


## ◆ DC output wire/connector

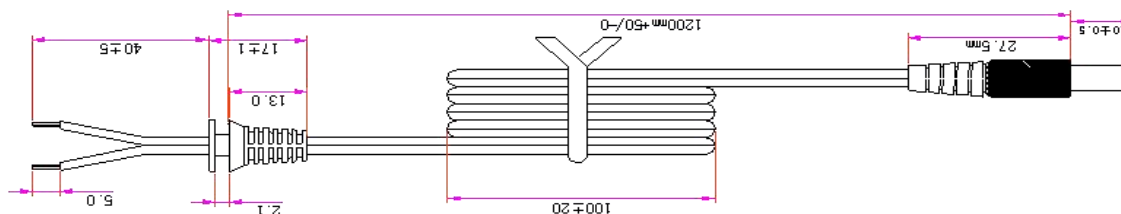
- **Standard DC connector—DC5521**



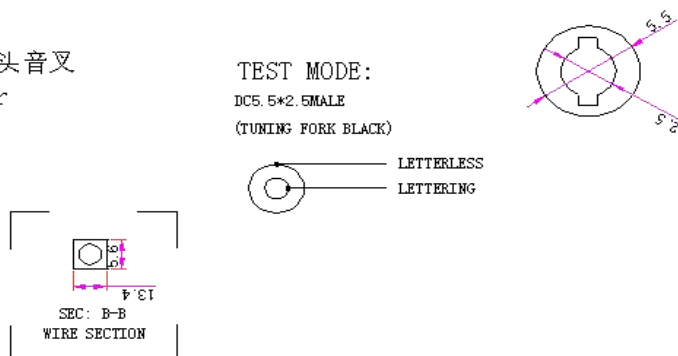
1. CORD MATERIAL: 2464 AWG24\*2C.
2. DC PLUG TYPE: 5.5\*2.1\*12mm 直头音叉
3. INSULATION: PVC 3.5mm diameter
4. OUT JACKET: PVC. COLOR: Black.
5. TEMPERATURE: 80° C.
6. Unit: mm



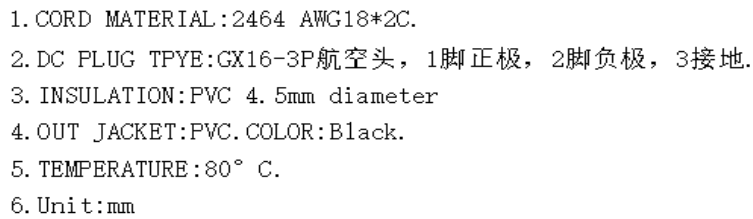
- **Other optimal DC connector—DC5525**



1. CORD MATERIAL: 2464 AWG24\*2C.
2. DC PLUG TYPE: 5.5\*2.5\*10mm 直头音叉
3. INSULATION: PVC 3.5mm diameter
4. OUT JACKET: PVC. COLOR: Black.
5. TEMPERATURE: 80° C.
6. Unit: mm



- **Other optimal DC connector—AERO**



Technical drawing of the USB cable assembly showing dimensions:

- Overall length:  $1200 \text{ mm} \pm 50/-0$
- Distance from USB connector to the start of the braided shield:  $100 \pm 20$
- Length of the braided shield section:  $8.34 \text{ mm}$
- Length of the outer jacket section:  $6.8 \text{ mm}$

- More options available.....