

Preamplifier Power Supply Board

APV4004

Manual

Version 1. 2. 0

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Safety Precautions / Disclaimer

Thank you for purchasing the product of Techno AP Co., Ltd. (hereinafter referred to as "our company"). Before using the product, please read this "Safety Precautions / Disclaimer" and be sure to observe the contents to ensure correct use.

Even if an accident occurs due to the use of our products, we will not be liable for any damages including abnormalities of devices, detectors, connected devices and applications, damages caused by failures, and other secondary damages.



Prohibited matter

- It cannot be used for applications that require special quality and reliability related to human life and accidents.
- Please refrain from using the product in places with high temperature, high humidity, and high vibration (excluding countermeasures).
- Do not apply more power than rated.
- Do not turn on the board product with other metals in contact with the board surface.



Notes

- Turn off the power immediately if there is smoke or abnormal heat generation.
- It may not work properly in a noisy environment.
- Be careful of static electricity.
- Product specifications and related documents are subject to change without notice.

Warranty conditions

The warranty conditions for "our products" are as follows.

- Period: One year after purchase.
- Contents: If the product breaks down during use within the warranty period, it will be repaired or replaced.
- Not applicable: We do not guarantee if the cause of failure falls under any of the following.
 1. Use other than the original usage of "our products"
 2. In addition to the above, causes other than "our company" or "our products" (including force majeure such as natural disasters)
 3. Consumables, etc.

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1. Overview

Preamplifier power supply board APV4004 (hereinafter referred to as this device) is a standard VME type power supply board for preamplifiers. There are 4 channels, and the preamplifier voltage +/- 12 V (50 mA or more) and +/- 24 V (50 mA or more) are output from each channel. The output connector is a 9-pin D-type, and the pin layout is NIM standard compliant.

This manual describes the handling of this device.

* The contents of this manual are subject to change without notice.

2. Specifications

1. OUTPUT

- Number of channel 4 channels
- Connector 9-pin D-type female, with pull-out prevention metal fittings
- Current
 - +12 V: 50 mA or more *The total of all channels should not exceed 230 mA
 - 12 V: 50 mA or more *The total of all channels should not exceed 230 mA
 - +24 V: 50 mA or more *The total of all channels should not exceed 230 mA
 - 24 V: 50 mA or more *The total of all channels should not exceed 230 mA
- Pin assignment
 - 1: GND
 - 2: GND
 - 3: NC (disconnected)
 - 4: +12 V
 - 5: NC (disconnected)
 - 6: -24 V
 - 7: +24 V
 - 8: NC (disconnected)
 - 9: -12 V

2. Indicate

- LED POWER

- 3. Input power supply Recommended power supply capable of outputting +12 V, 2 A or more
- 4. External dimensions 20 mm (W) × 262 mm (H) × 187 mm (D), VME6U single width
- 5. Weight Approx. 350 g

3. Appearance



Image 1 APV4004

1. POWER: LED for checking VME main power supply. Lights when power is supplied
2. CH1 to 4: 9-pin D-type connector for preamplifier power supply

4. Usage rules

1. Make sure that all power supplies such as the VME power supply rack and high-voltage power supply are turned off.

2. Connect the preamplifier and APV4004 using the D-subn 9-pin cable as shown in the photo below. Check again that the pin assignments on the preamplifier side and the pin assignments on the APV4004 match.

CAUTION

Do not use a data communication cable with a 9-pin D-type connector but use a dedicated power supply cable.



Image 2 Preamplifier power cable (LEFT: APV4004 side connector, RIGHT: preamplifier side connector)

3. Fix the connector of the preamplifier power cable with the disconnection prevention bracket of the 9-pin D-type connector on each CH on the APV4004 side.

4. Fix the connector of the other preamplifier power cable to the preamplifier.

5. Connect the high-voltage power cable and preamplifier output signal cable required for the preamplifier.

6. Turn on the power of the VME power rack and supply power to the preamplifier.

7. Check the preamplifier output signal with an oscilloscope

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