BKVGAWNJ BKVGAWNJ

Instruction Manual for BKVGAWNJ DC EMI Filter

Model: BKVGAWNJ

1. Introduction

This manual provides essential information for the safe and effective use of your BKVGAWNJ DC Electromagnetic Interference (EMI) Filter. This filter is designed to suppress electromagnetic interference in DC power lines, ensuring cleaner power delivery and improved performance of connected electronic devices. It is suitable for various DC voltage applications including 6V, 12V, 24V, 36V, and up to 110V, 400V, or 600V DC systems, depending on the specific variant.

2. Safety Information

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or damage to the product or connected equipment.

- **Electrical Hazard:** Always disconnect power to the circuit before installing or servicing the filter.
- **Proper Voltage and Current:** Ensure the filter's voltage and current ratings match or exceed the requirements of your application. Using an improperly rated filter can lead to damage or malfunction.
- **Professional Installation:** If you are not familiar with electrical wiring, seek assistance from a qualified electrician.
- **Environmental Conditions:** Do not expose the filter to moisture, extreme temperatures, or corrosive environments.
- **Secure Connections:** Ensure all wire connections are secure and properly insulated to prevent short circuits.

3. Package Contents

Your package should contain the following items:

- BKVGAWNJ DC EMI Filter (1 unit)
- Integrated connecting wires

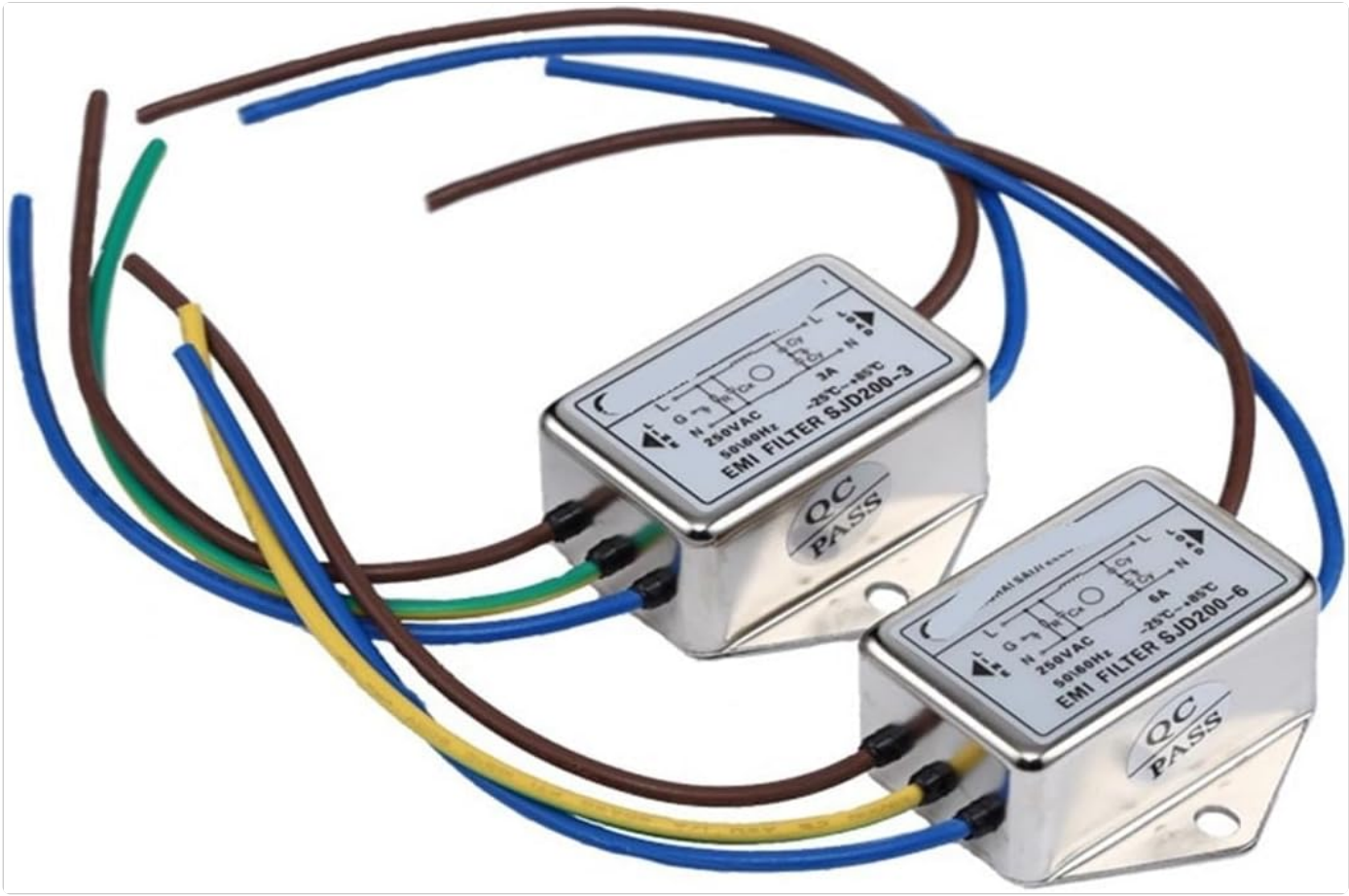

Figure 3.1: BKVGAWNJ DC EMI Filters with connecting wires. This image displays two BKVGAWNJ DC EMI filters, each a compact, rectangular metal casing with wires extending from one end. The filters are shown with various colored wires (blue, brown, green, yellow) indicating connections. The top surface of each filter has a label detailing specifications such as 'EMI FILTER SJD200-3' or 'SJD200-6', voltage ratings, and current ratings, along with an 'QC PASS' stamp. Mounting holes are visible on the side flanges of the metal casing.

4. Installation and Setup

The BKVGAWNJ DC EMI Filter is designed for straightforward installation. Follow these steps carefully:

1. **Power Disconnection:** Before beginning any installation, ensure that the power supply to the circuit where the filter will be installed is completely disconnected. Verify with a voltmeter if necessary.
2. **Mounting:** Choose a suitable, stable location for the filter. The filter features mounting holes on its metal casing for secure attachment. Use appropriate screws or fasteners (not included) to mount the filter firmly to a surface.
3. **Wiring Connections:**
    - Identify the input and output wires of the filter. The filter typically has designated input (source) and output (load) terminals, often marked 'L' (Line/Positive) and 'N' (Neutral/Negative) on the label, even for DC applications.
    - Connect the positive (+) DC power source wire to the 'L' (Line) input terminal of the filter.
    - Connect the negative (-) DC power source wire to the 'N' (Neutral) input terminal of the filter.
    - Connect the 'L' (Line) output terminal of the filter to the positive (+) input of your DC load device.
    - Connect the 'N' (Neutral) output terminal of the filter to the negative (-) input of your DC load device.
    - If your filter variant includes a ground wire (often green or green/yellow), connect it to a proper earth ground point in your system.

    Note: Refer to the specific markings on your filter unit for precise terminal identification. The image shows multiple colored wires; ensure correct polarity for DC applications.
4. **Insulation and Verification:** After making all connections, ensure they are tight and properly insulated. Double-

check all wiring against your circuit diagram and the filter's markings.

5. **Power Restoration:** Once installation is complete and verified, carefully restore power to the circuit.

5. Operation

The BKVGAWNJ DC EMI Filter operates passively once installed correctly. It continuously filters electromagnetic interference from the DC power line without requiring any user interaction or adjustments. The filter begins functioning immediately upon power being supplied to the circuit it is integrated into.

6. Maintenance

The BKVGAWNJ DC EMI Filter is designed for maintenance-free operation. There are no user-serviceable parts inside. To ensure optimal performance and longevity:

- **Regular Inspection:** Periodically inspect the filter and its wiring for any signs of physical damage, loose connections, or overheating.
- **Cleaning:** If necessary, gently wipe the exterior of the filter with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Environmental Control:** Ensure the operating environment remains within the specified temperature and humidity ranges.

7. Troubleshooting

If you experience issues after installing the EMI filter, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
No power to load device after filter installation.	Incorrect wiring. Loose connections. Filter damaged. Power supply issue.	Verify all wiring connections (input/output, polarity). Ensure all terminals are securely fastened. Inspect filter for visible damage. Check the power source independently.
EMI/Noise still present.	Filter not properly grounded (if applicable). Interference source is not on the power line. Filter rating insufficient for noise level.	Ensure proper grounding of the filter and system. Identify if noise is radiating from another source (e.g., cables, nearby equipment). Consider a higher-rated filter or additional filtering solutions.
Filter becomes hot during operation.	Overcurrent condition. Short circuit in the load. Improper ventilation.	Verify the current draw of the load does not exceed the filter's rating. Check the load device for any short circuits. Ensure adequate airflow around the filter.

If problems persist, contact customer support.

8. Technical Specifications

Feature	Specification
Product Type	DC EMI Filter
Model Number	BKVGAWNJ (Specific variant may vary, e.g., SJD200-3, SJD200-6)
Voltage Rating	6V, 12V, 24V, 36V, 110V DC (up to 400VDC or 600VDC depending on variant)
Current Rating	1A, 3A, 6A (depending on variant)
Operating Temperature	-25°C to +85°C (as per OCR on image)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Item Weight	1.76 ounces
Assembly Required	No
Number of Pieces	1
Manufacturer	BKVGAWNJ

9. Warranty Information

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please refer to your purchase documentation or contact the seller for specific warranty terms and conditions. The warranty typically covers manufacturing defects but does not cover damage resulting from improper installation, misuse, accidents, or unauthorized modifications.

10. Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact your retailer or the manufacturer directly. Have your product model number and purchase details ready when contacting support.
Manufacturer: BKVGAWNJ
For the most up-to-date contact information, please visit the official BKVGAWNJ website or refer to your purchase platform.