

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

> [NHJLFKSA](#) /

> [NHJLFKSA KRS440B AVR Brushless Diesel Generator Automatic Voltage Regulator User Manual](#)

## NHJLFKSA KRS440B

# NHJLFKSA KRS440B Automatic Voltage Regulator Instruction Manual

### 1. INTRODUCTION

The NHJLFKSA KRS440B Automatic Voltage Regulator (AVR) is designed to maintain a stable output voltage from a brushless diesel generator. This manual provides essential information for the safe installation, operation, and maintenance of the KRS440B AVR. Please read this manual thoroughly before installation and operation.

### 2. SAFETY INFORMATION

**WARNING: ELECTRIC SHOCK RISK. Live terminals and heatsink are present on this device.**

- Always disconnect all power sources from the generator and AVR before attempting any installation, wiring, or maintenance.
- Installation and servicing should only be performed by qualified and experienced personnel.
- Ensure proper grounding of the generator system to prevent electrical hazards.
- Do not operate the AVR in wet, damp, or excessively dusty environments.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.

### 3. PRODUCT OVERVIEW

The KRS440B is a compact and robust Automatic Voltage Regulator. It features various terminals for connection to the generator's exciter, sensing voltage, and power supply. Adjustable potentiometers are typically included for fine-tuning voltage, stability, and under-frequency protection (UFRO) settings.



Figure 1: Top view of the KRS440B AVR, highlighting the warning label and component layout.



Figure 2: Back view of the KRS440B AVR, displaying the model identification label.

## 4. SETUP AND INSTALLATION

Proper installation is critical for the safe and effective operation of the AVR. Refer to your generator's specific wiring diagram in conjunction with these general instructions.

### 4.1 Pre-installation Check

- Verify that the KRS440B AVR is compatible with your specific brushless diesel generator model.
- Inspect the AVR for any signs of physical damage during shipping. Do not install a damaged unit.

### 4.2 Mounting

- Securely mount the AVR in a location that is free from excessive vibration, moisture, and direct heat sources.
- Ensure adequate ventilation around the unit to prevent overheating.

### 4.3 Wiring Connections

Refer to the terminal markings on the KRS440B and your generator's wiring diagram for precise

connections. The following are general connection points:

- **Power Input:** Connect the main power supply to the designated terminals on the AVR.
- **Sensing Voltage:** Connect the voltage sensing leads from the generator's output terminals to the AVR's sensing inputs. This allows the AVR to monitor the generator's output voltage.
- **Exciter Field:** Connect the exciter field leads from the AVR to the generator's exciter. The AVR controls the excitation current to regulate the output voltage.
- **Auxiliary Inputs (if applicable):** Connect any auxiliary inputs such as remote voltage adjustment or parallel operation signals as required by your system.

**Important: Double-check all wiring connections for correctness and tightness before applying power to the system. Incorrect wiring can cause damage to the AVR, generator, or pose a safety risk.**

## 5. OPERATING INSTRUCTIONS

Once the KRS440B AVR is correctly installed and wired, it will automatically regulate the generator's output voltage. Initial adjustments may be necessary to optimize performance.

### 5.1 Initial Adjustment

- **Start Generator:** Start the diesel generator and allow it to reach its normal operating speed.
- **Voltage Adjustment (VOLT):** Carefully adjust the 'VOLT' potentiometer on the AVR to set the generator's output voltage to the desired level (e.g., 230V, 400V, or 480V, depending on your system). Use a calibrated voltmeter for accurate measurement.
- **Stability Adjustment (STAB):** Adjust the 'STAB' (Stability) potentiometer to achieve stable voltage without oscillations or hunting. Turn clockwise to increase stability, counter-clockwise to decrease. Find the optimal point where voltage is stable without being sluggish.
- **Under-Frequency Roll-Off (UFRO) (if present):** If your AVR has a UFRO adjustment, set it according to the generator's nominal operating frequency. This feature reduces the output voltage when the generator speed drops below a preset threshold, protecting the generator from damage.

Monitor the generator's output voltage and frequency during operation to ensure stable and correct performance.

## 6. MAINTENANCE

The KRS440B AVR is designed for reliable operation with minimal maintenance. However, periodic checks are recommended.

- **Visual Inspection:** Regularly inspect the AVR and its wiring connections for any signs of wear, corrosion, loose terminals, or physical damage.
- **Cleanliness:** Keep the unit clean and free from dust, dirt, and debris, which can impede cooling and lead to component failure.
- **Ventilation:** Ensure that the area around the AVR remains well-ventilated to prevent heat buildup.
- **No User Serviceable Parts:** Do not attempt to open or repair the internal components of the AVR. Contact qualified service personnel for any issues requiring internal inspection or repair.

## 7. TROUBLESHOOTING

This section outlines common issues and potential solutions. Always ensure power is disconnected before inspecting wiring.

## 7.1 No Output Voltage

- **Check Wiring:** Verify all power input, sensing, and exciter field connections are secure and correct.
- **Generator Speed:** Ensure the generator engine is running at its rated speed.
- **Fuses:** Inspect any fuses in the AVR circuit or generator control panel.
- **Residual Magnetism:** Some generators may require flashing the field to restore residual magnetism if it has been lost.

## 7.2 Unstable Output Voltage (Hunting)

- **Stability Adjustment:** Adjust the 'STAB' potentiometer. If turned too far in either direction, it can cause instability.
- **Loose Connections:** Check for any loose sensing leads or power connections.
- **Engine Speed:** Ensure the generator engine speed is stable and not fluctuating.

## 7.3 Incorrect Output Voltage

- **Voltage Adjustment:** Adjust the 'VOLT' potentiometer to the desired output voltage.
- **Sensing Input:** Verify the correct voltage is being supplied to the AVR's sensing inputs.

**If troubleshooting steps do not resolve the issue, contact a qualified technician or the manufacturer for further assistance.**

## 8. SPECIFICATIONS

- **Brand:** NHJLFKSA
- **Model:** KRS440B
- **Item Weight:** Approximately 1.76 ounces (50 grams)
- **Package Dimensions:** Approximately 1.18 x 0.79 x 0.39 inches (3 x 2 x 1 cm)
- **ASIN:** B0F4NHG7WD
- **Manufacturer:** NHJLFKSA

## 9. WARRANTY AND SUPPORT

For specific warranty information, technical support, or service inquiries regarding your NHJLFKSA KRS440B Automatic Voltage Regulator, please contact the manufacturer directly. Refer to your purchase documentation or the manufacturer's official website for current contact details and warranty terms.