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› KB Electronics 8811012 Solid State Variable Speed AC Electric Motor Control Instruction Manual

KB ELECTRONICS 8811012

KB Electronics 8811012 Solid State Variable Speed AC Electric Motor Control Instruction Manual

Model: K177-1005

INTRODUCTION

This manual provides essential instructions for the safe and effective installation, operation, and maintenance of your KB Electronics 8811012 Solid State Variable Speed AC Electric Motor Control. Please read this manual thoroughly before installation and use.

SAFETY INFORMATION

WARNING: Risk of Electric Shock. Installation and servicing should only be performed by qualified personnel. Disconnect power before installation or servicing. Failure to follow these instructions may result in serious injury or death.

- Ensure all local and national electrical codes are followed.
- Verify the motor's nameplate amperage does not exceed the control's 5.0 Max Amp rating.
- Motor must have a fan blade installed on the shaft for cooling, especially when operating at reduced speeds.
- Avoid stalling the motor; a stalled motor can overheat and damage both the motor and the control.
- This control is not suitable for Capacitor Start or Capacitor Run motors.
- This control is not suitable for gear motors.

PRODUCT OVERVIEW

The KB Electronics 8811012 is a solid-state variable speed control designed to provide infinite variable speed for shaded pole and Permanent Split Capacitor (PSC) motors. It is designed for installation in a standard 2" x 4" electrical wall box.



Figure 1: KB Electronics 8811012 Variable Speed AC Motor Control. This image shows the control unit with its faceplate, speed adjustment knob, and exposed wiring for installation. The faceplate is labeled "Vari-Speed" and includes "OFF" and "HIGH" markings around the knob.

Key Features:

- Provides infinite variable speed for shaded pole and PSC motors.
- Designed for standard 2" x 4" electrical wall box installation.
- Maximum current rating: 5.0 Amps.
- Operating Voltage: 115 Volts AC.
- UL & CSA Approved for safety and quality.
- Suitable for applications such as fans, blowers, fireplace blowers, attic fans, humidifiers, and ventilators.

SETUP AND INSTALLATION

1. **Disconnect Power:** Before beginning any installation, ensure that power to the circuit is completely disconnected at the main breaker or fuse box.
2. **Prepare Wall Box:** This control is designed to fit into a standard 2" x 4" electrical wall box. Ensure the box is properly

installed and secured.

- Wiring Connections:** Connect the control's wires to the motor and power supply according to the wiring diagram provided with the product packaging (not included in this manual). Typically, there will be connections for line voltage input and motor output. Ensure all connections are secure and insulated. The control features screw terminals for reliable connections.
- Mounting:** Secure the control unit to the electrical wall box using the provided screws. Ensure the faceplate is flush with the wall surface.
- Verify Motor Cooling:** Confirm that the motor connected to this control has a fan blade installed on its shaft. This is critical for cooling, especially when the motor operates at reduced speeds.
- Re-apply Power:** Once installation is complete and all connections are verified, restore power to the circuit.

OPERATING INSTRUCTIONS

- Power On:** Ensure the motor control is properly installed and power is supplied to the circuit.
- Adjust Speed:** Rotate the knob on the faceplate to adjust the motor speed. Turning the knob towards "HIGH" will increase the motor speed, while turning it towards "OFF" will decrease the speed and eventually turn the motor off.
- Monitor Motor:** Observe the motor's operation. If the motor exhibits signs of stalling (e.g., humming without rotating, excessive heat), increase the speed setting. Continuous stalling can damage the motor and control.
- Power Off:** To turn off the motor, rotate the knob fully to the "OFF" position.

MAINTENANCE

- Regular Inspection:** Periodically inspect the control and its wiring for any signs of damage, loose connections, or overheating.
- Cleaning:** Keep the control's faceplate clean and free of dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners directly on the control.
- Professional Servicing:** If the control malfunctions or shows signs of damage, disconnect power immediately and contact a qualified electrician or the manufacturer for assistance. Do not attempt repairs yourself unless qualified.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Motor does not start.	No power to the control; Loose wiring connection; Control knob in "OFF" position.	Check circuit breaker/fuse; Verify all wiring connections; Rotate knob towards "HIGH".
Motor hums but does not rotate (stalls).	Speed setting too low; Motor type incompatibility; Insufficient torque.	Increase speed setting; Ensure motor is shaded pole or PSC; Verify motor is not a gear motor or capacitor start/run type.
Motor overheats.	Lack of proper motor cooling (fan blade); Prolonged operation at very low speeds causing stall; Motor overloaded.	Ensure motor has a fan blade; Avoid prolonged operation at speeds where motor struggles; Reduce motor load if possible.
Control does not vary speed.	Incorrect motor type; Faulty control unit.	Confirm motor is compatible (shaded pole or PSC); Contact manufacturer for replacement if control is faulty.

SPECIFICATIONS

Specification	Value
Brand	KB ELECTRONICS
Model Number	8811012 (K177-1005)
Maximum Current Rating	5.0 Amps
Operating Voltage	115 Volts (AC)
Operation Mode	ON-OFF, Variable Speed
Connector Type	Screw Terminals
Mounting Type	Wall Mount (Standard 2" x 4" Electrical Wall Box)
Material	Metal (Contact material: Copper)
Certifications	UL, CSA Approved
Parcel Dimensions	12.4 x 7.7 x 5.31 cm

WARRANTY AND SUPPORT

KB Electronics products are manufactured to high standards. For specific warranty information, please refer to the documentation included with your purchase or visit the official KB Electronics website. Please note that controls that have been installed are generally not returnable.

For technical support or inquiries, please contact KB Electronics directly through their official channels.

