

Knowtek DSE701K-AS

Knowtek DSE701K-AS Generator Controller User Manual

Model: DSE701K-AS | Brand: Knowtek

1. INTRODUCTION

This manual provides detailed instructions for the Knowtek DSE701K-AS Generator Controller, covering its features, installation, operation, maintenance, and technical specifications. The DSE701K-AS is an automatic start control module designed for engine monitoring and protection, featuring automatic start/stop, fault indication, and an hour counter.

The DSE701K-AS is available in automatic start versions, offering an excellent range of engine monitoring and protection features. This module is designed to monitor low oil pressure, high engine temperature, overspeed conditions, and a user-defined auxiliary input. It also includes a remote start signal input, allowing the module to be activated from a pre-defined remote location.

2. KEY FEATURES

- Microcomputer control for precise operation.
- Automatic and manual engine start/stop capabilities.
- LED indicators for fault information.
- LCD display for running accumulative time (hours counter).
- Protection against low lubricating oil pressure.
- Monitoring of battery charging via the WL terminal on the charge alternator.
- Automatic engine shutdown upon detection of a fault condition.
- Protection against high cool water temperature.
- Engine overspeed protection.
- Remote start signal input for external activation.
- Simultaneous monitoring of multiple engine parameters.



Figure 2.1: Front panel of the DSE701K-AS controller, showing LED indicators, AUTO button, and key switch. The indicators represent various engine statuses and fault conditions.

3. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the DSE701K-AS controller. It is recommended that installation be performed by qualified personnel.

3.1 Mounting the Controller

- Ensure the mounting location is free from excessive vibration, moisture, and extreme temperatures.
- Cut a panel opening of appropriate dimensions for the controller.
- Insert the controller into the panel opening and secure it using the provided mounting clips or screws.

3.2 Electrical Connections

Refer to the wiring diagram provided with your generator set or consult a qualified electrician for specific connection details. General connections include:

- **Power Supply:** Connect the controller to a stable 12V DC power source.
- **Engine Start/Stop:** Connect to the generator's starter motor and fuel solenoid.
- **Sensor Inputs:** Connect sensors for low oil pressure, high engine temperature, and overspeed.

- **Battery Charging:** Connect the WL terminal to the charge alternator for battery monitoring.
- **Remote Start:** Connect the remote start signal input to the desired remote activation device.



Figure 3.1: Rear view of the DSE701K-AS controller, displaying the terminal blocks for electrical connections. Numbers 1-9 are visible on the left block, and 10-11 on the right block, indicating connection points for various generator functions and sensors.

4. OPERATION

4.1 Manual Start/Stop

1. Insert the key into the key switch on the front panel.
2. Turn the key to the "Manual" or "Start" position (refer to specific key markings if present).
3. The generator will attempt to start. Monitor the engine status via the LED indicators.
4. To stop the generator, turn the key to the "Stop" or "Off" position.

4.2 Automatic Operation

1. Ensure the key is in the "Auto" position.
2. Press the "AUTO" button on the front panel to enable automatic mode. The "AUTO" indicator should illuminate.
3. The controller will now monitor the remote start signal input.

4. Upon receiving a valid remote start signal, the controller will automatically initiate the generator start sequence.
5. The generator will run until the remote start signal is removed, at which point the controller will initiate the shutdown sequence.

4.3 Monitoring Engine Status

The LED indicators on the front panel provide visual feedback on the engine's status and any detected fault conditions:

- **Low Oil Pressure:** Indicates insufficient lubricating oil pressure.
- **High Engine Temperature:** Indicates the engine coolant temperature is above safe limits.
- **Overspeed:** Indicates the engine RPM has exceeded safe operating limits.
- **Battery Charge:** Indicates the status of the battery charging system.
- Other indicators may include general fault, running status, and pre-heat (if applicable).



Figure 4.1: The DSE701K-AS controller shown with its accompanying keys. The front panel features a green AUTO button, a key switch, and a series of LED indicators for monitoring engine parameters such as oil pressure, battery, and temperature.

5. MAINTENANCE

The DSE701K-AS controller requires minimal maintenance. However, regular checks of the generator system are essential.

- **Hours Counter:** The LCD display provides an accumulative running time. Use this information to schedule routine generator maintenance, such as oil changes, filter replacements, and general inspections, in accordance with the generator manufacturer's recommendations.

- **Cleaning:** Keep the controller's front panel clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Connections:** Periodically inspect all electrical connections to ensure they are secure and free from corrosion.

6. TROUBLESHOOTING

This section provides guidance on common issues. For complex problems, consult a qualified technician.

Problem	Possible Cause	Solution
Generator fails to start in Auto mode.	No remote start signal; controller not in Auto mode; power supply issue.	Verify remote start signal; ensure "AUTO" button is pressed and indicator is on; check power connections.
Engine shuts down unexpectedly.	Fault condition detected (e.g., low oil pressure, high temperature, overspeed).	Check LED fault indicators; inspect engine oil level, coolant level, and engine speed. Address the underlying engine issue.
Battery charge indicator shows fault.	Faulty charge alternator; wiring issue to WL terminal; low battery voltage.	Inspect charge alternator and its wiring; check battery voltage and connections.
No display or indicators.	No power to the controller.	Check 12V DC power supply connections and fuses.

7. TECHNICAL SPECIFICATIONS

Specification	Detail
Brand	Knowtek
Model Name	701K-AS
Part Number	DSE701
Power Source	Battery Powered
Voltage	12 Volts
Wattage	2 watts
Special Feature	Automatic Start Stop
Recommended Uses	Monitoring
Included Components	Remote start key or device
Material	Steel, Aluminum, Cast Iron
Color	Black, Silver
Item Weight	5.6 ounces

Specification	Detail
Product Dimensions	3 x 3 x 2 inches
Ignition System Type	Electric Start
Engine Type	4 Stroke

8. WARRANTY INFORMATION

The Knowtek DSE701K-AS Generator Controller comes with a **1-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, accidents, or unauthorized modifications. For warranty claims or service, please retain your proof of purchase and contact Knowtek customer support.

9. CUSTOMER SUPPORT

If you encounter any issues or have questions regarding the Knowtek DSE701K-AS Generator Controller that are not addressed in this manual, please contact Knowtek customer support. You can typically find contact information on the manufacturer's official website or through your point of purchase. When contacting support, please have your product model number (DSE701K-AS) and a detailed description of your issue ready.