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› DWFSKZKV DSE8610 Synchronising and Load Sharing Auto Start Control Module User Manual

DWFSKZKV DSE8610

DWFSKZKV DSE8610 Synchronising and Load Sharing Auto Start Control Module User Manual

Model: DSE8610MKII

1. INTRODUCTION

The DWFSKZKV DSE8610MKII is an advanced control module designed for complex load sharing and synchronising generator applications. This module provides comprehensive control, monitoring, and protection features for grid-type generator systems, ensuring efficient and reliable power management. This manual provides essential information for the proper installation, operation, and maintenance of the DSE8610MKII controller.

2. PRODUCT OVERVIEW

The DSE8610MKII control module is engineered to manage sophisticated generator setups, including those requiring synchronisation with the mains (utility) supply and load sharing among multiple generators. Its robust design and extensive feature set make it suitable for demanding industrial environments. Key capabilities include:

- Complex load sharing and synchronising technology.
- Suitable for various grid-type generator applications.
- Integrated monitoring and protection functions.
- Designed for calculating fuel efficiency and meeting emission directives.

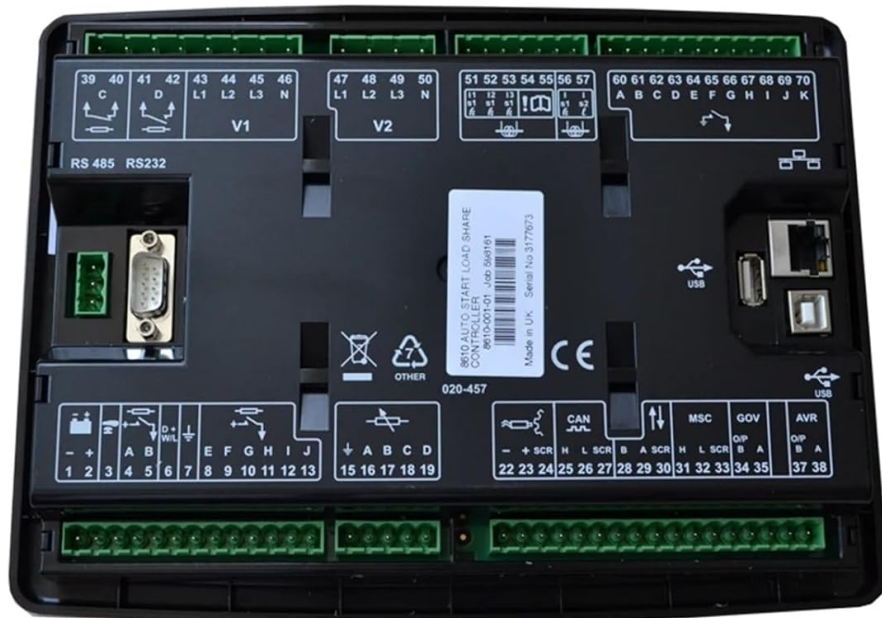


Figure 2.1: Front view of the DSE8610MKII controller. This image displays the front panel of the DSE8610 controller, featuring the main display screen, navigation buttons, and dedicated control buttons for Stop, Manual, Auto, and Start functions. The DSE logo is visible on the top left.

3. SPECIFICATIONS

Feature	Specification
Overall Size	245 mm x 184 mm x 51 mm (9.6" x 7.2" x 2.0")
Panel Cutout Size	220 mm x 160 mm (8.7" x 6.3")
Maximum Panel Thickness	8.0 mm (0.3")
Weight	0.88 kg (1.94 lbs)
Manufacturer	DWFSKZKV
Model Number	DSE8610MKII

4. INSTALLATION (SETUP)

Proper installation is crucial for the safe and reliable operation of the DSE8610MKII controller. It is recommended that installation be performed by qualified personnel.

4.1 Panel Mounting

- Prepare a panel cutout of 220 mm x 160 mm (8.7" x 6.3").
- Ensure the panel thickness does not exceed 8.0 mm (0.3").
- Mount the controller securely into the cutout using the provided mounting clips.

4.2 Electrical Connections

Refer to the rear view diagram for detailed terminal connections. Ensure all wiring complies with local electrical codes and standards.



Figure 4.1: Rear view of the DSE8610MKII controller with terminal connections. This image shows the rear panel of the DSE8610 controller, detailing the various terminal blocks for electrical connections, including DC supply, AC inputs, outputs, RS232, RS485, CAN, ECU, MSC, GOV, and AVR. Key electrical specifications and certifications are also visible on the label.

- **DC Supply:** Connect the main DC power supply to the designated terminals. The module typically operates on 8V to 35V DC.
- **AC Inputs:** Connect generator and mains (utility) AC voltage and current inputs to the respective terminals (L1, L2, L3, N).
- **Outputs:** Connect control outputs for engine start/stop, fuel, and other auxiliary functions.
- **Communication Ports:** Utilize RS232, RS485, CAN, and USB ports for configuration, monitoring, and communication with other devices.
- **Analogue Inputs:** Connect sensors for parameters like oil pressure, engine temperature, and fuel level.

Warning: Ensure all power is disconnected before making any electrical connections to prevent electric shock or damage to the unit.

5. OPERATION

The DSE8610MKII controller features an intuitive interface for managing generator operations. Refer to Figure 2.1 for the location of control buttons and the display.

5.1 Control Modes

- **STOP Mode:** The generator is shut down and cannot start automatically. All outputs are de-energized.
- **MANUAL Mode:** Allows manual control of the generator. The generator can be started and stopped using the manual start/stop buttons.
- **AUTO Mode:** The controller automatically starts and stops the generator based on pre-configured conditions, such as mains failure or load demand. This mode is used for synchronising and load sharing operations.

5.2 Display and Navigation

The LCD display provides real-time information on generator status, engine parameters, electrical measurements, and alarms. Use the navigation buttons (up, down, left, right, enter) to scroll through menus and view different screens.

5.3 Synchronising and Load Sharing

In AUTO mode, the DSE8610MKII manages the synchronisation of the generator with the mains supply or other generators. It automatically adjusts engine speed and voltage to match the target supply before closing the breaker. Load sharing ensures that multiple generators distribute the load evenly, optimizing fuel efficiency and extending engine life.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your DSE8610MKII controller.

- **Cleaning:** Keep the controller's front panel clean and free from dust and debris. Use a soft, dry cloth. Avoid abrasive cleaners or solvents.
- **Connections Check:** Periodically inspect all electrical connections for tightness and signs of corrosion. Loose connections can lead to intermittent operation or damage.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates. Updates can provide new features, improvements, or bug fixes. Follow the provided instructions carefully for any update procedures.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent damage.

7. TROUBLESHOOTING

This section provides general guidance for common issues. For complex problems, consult a qualified technician or the manufacturer's support.

7.1 Common Issues

- **Controller Not Powering On:**

- Check the DC power supply connections and ensure the voltage is within the specified range (8V to 35V).
- Verify that any inline fuses are intact.
- **Generator Fails to Start:**
 - Ensure the controller is in AUTO or MANUAL mode.
 - Check for active alarms or fault codes displayed on the screen. Address any indicated issues (e.g., low fuel, low oil pressure, high engine temperature).
 - Verify engine battery voltage and starter motor connections.
- **Synchronisation Issues:**
 - Confirm that all AC voltage and current inputs are correctly wired and calibrated.
 - Check the settings for synchronisation parameters in the controller configuration.
 - Ensure the mains (utility) supply is stable and within acceptable limits.

If an alarm or fault code is displayed, consult the DSE8610MKII technical documentation or contact support for specific diagnostic steps.

8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your supplier. DWFSKZKV provides technical support for their products. For assistance, please reach out to the manufacturer or authorized distributor with your product model number (DSE8610MKII) and any relevant purchase details.

Manufacturer: DWFSKZKV

ASIN: B0D38MT4MK