

Graigar DSE3110

Instruction Manual: Original Deep Sea DSE3110 Generator Controller

Brand: Graigar | Model: DSE3110



1. PRODUCT OVERVIEW

The Graigar DSE3110 Generator Controller is a compact and versatile control module designed for single-set generator applications. It offers comprehensive features for monitoring and protection, suitable for both electronic and non-electronic engines. The controller can operate in manual or auto start modes, providing flexibility for various operational needs.

Key features include:

- Comprehensive control module for single-set applications.
- Supports both manual and auto start modes.
- Designed for electronic and non-electronic engines.
- Advanced engine monitoring and protection features.
- Back-lit LCD display for clear status indication.
- Monitors engine speed, frequency, voltage, and run hours.
- Displays warning and shutdown status.
- Six digital inputs and four outputs for versatile connectivity.
- Configurable via front panel or DSE configuration suite PC software.

Product Visuals



Figure 1: Front view of the DSE3110 Generator Controller, showing the LCD display, navigation buttons, and control buttons (Stop/Reset, Auto, Start).



Figure 2: Angled front view of the DSE3110, providing a perspective of its compact design.



Figure 3: Bottom view of the DSE3110, showing the mounting tabs.



Figure 4: Side view of the DSE3110, highlighting its depth and overall dimensions.



Figure 5: Rear view of the DSE3110, showing the various connection ports for power, inputs, and outputs.



Figure 6: Detailed rear view of the DSE3110, illustrating the wiring terminals and USB port for configuration.



Figure 7: The DSE3110 controller shown alongside its included accessories, such as wiring connectors and mounting hardware.



Figure 8: The DSE3110 controller packaged in its retail box, with accessories visible.



Figure 9: The retail box for the DSE3110, displaying Deep Sea Electronics branding and website information.

2. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the DSE3110 controller. It is recommended that installation be performed by a qualified technician.

2.1 Unboxing and Initial Inspection

Upon receiving your DSE3110 controller, carefully open the packaging and inspect the contents for any signs of damage. Ensure all components listed in the packing list are present.

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Video 1: An unboxing and initial overview of the Deep Sea DSE3110 Diesel Generator Controller, demonstrating the contents of the package and the physical appearance of the unit.

2.2 Mounting the Controller

The DSE3110 is designed for panel mounting. Cut an appropriate opening in your control panel according to the dimensions provided in the specifications section. Secure the controller using the supplied mounting clips.

2.3 Electrical Connections

Connect the DSE3110 to your generator and associated systems following the wiring diagram. Pay close attention to power supply, engine inputs (speed, oil pressure, coolant temperature), generator sensing (voltage, frequency), and output connections (fuel solenoid, crank, alarms).

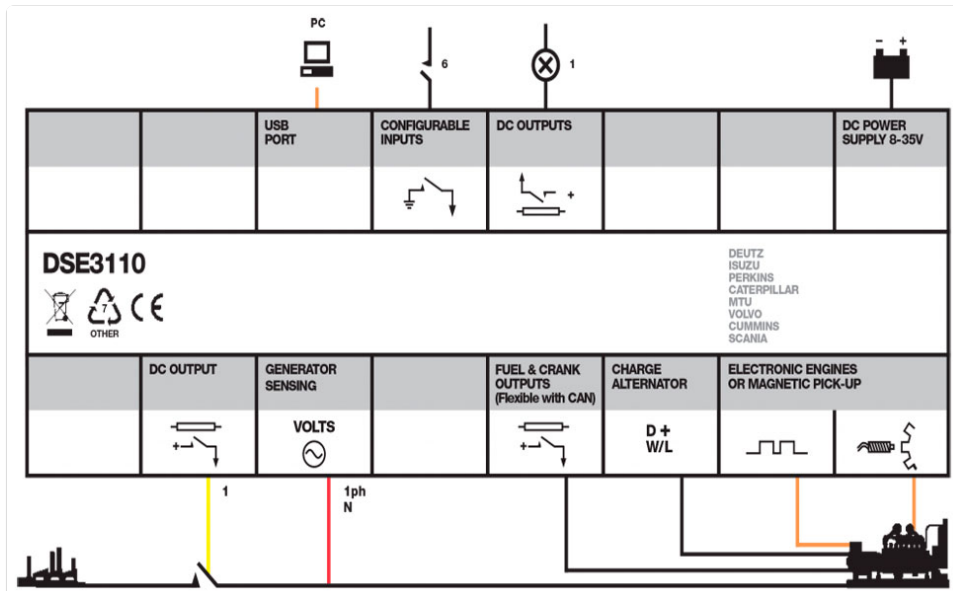


Figure 10: General wiring diagram for the DSE3110, illustrating connections for DC power, configurable inputs, DC outputs, generator sensing, fuel & crank outputs, charge alternator, and engine types (electronic/magnetic pick-up).

- **DC Supply:** Connect to a stable 8-35V DC power source.
- **DC Outputs:** Connect to actuators or relays as required (max 30V, 2A).
- **DC Inputs:** Connect to sensors or switches (max 30V).
- **AC Volts Inputs:** For generator voltage sensing (max 277Vac 50/60Hz).
- **Charge Alternator:** Connect to the D+ terminal of the charge alternator (max 30V, 2.5W).
- **CAN Port:** For electronic engine communication (max 5V).
- **Mag Pickup:** For magnetic pick-up speed sensing (max 70V, 10kHz).
- **USB Port:** For PC configuration using DSE Configuration Suite software.

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

3. OPERATING INSTRUCTIONS

The DSE3110 controller offers both manual and automatic operation modes.

3.1 Front Panel Controls

- **Stop/Reset Button (Red 'O'):** Stops the generator in manual mode or resets active alarms.
- **Auto Button (White 'AUTO'):** Places the module in automatic mode, allowing the generator to start and stop based on external signals (e.g., remote start input).
- **Start Button (Green 'I'):** Starts the generator in manual mode.
- **Navigation Buttons (Up/Down Arrows):** Used to scroll through the display screens and adjust settings

during configuration.

- **LCD Display:** Shows engine parameters, alarms, and operational status.

3.2 Manual Mode Operation

1. Press the **Stop/Reset** button to ensure the module is in Stop mode and any active alarms are reset.
2. Press the **Start** button. The generator will attempt to start.
3. To stop the generator, press the **Stop/Reset** button.

3.3 Auto Mode Operation

1. Press the **Auto** button. The module will enter Auto mode.
2. The generator will now automatically start when a remote start signal is received and stop when the signal is removed.
3. In Auto mode, the module continuously monitors the system and will initiate a shutdown if a fault condition is detected.

3.4 Display Navigation

Use the Up and Down arrow buttons to cycle through the various display screens, which show parameters such as engine RPM, oil pressure, coolant temperature, generator voltage, frequency, and run hours.

4. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your DSE3110 controller.

- **Cleaning:** Periodically clean the front panel with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Connections:** Annually inspect all wiring connections to ensure they are secure and free from corrosion.
- **Firmware Updates:** Check the Deep Sea Electronics website for any available firmware updates for your DSE3110 model. Updates can be applied using the DSE Configuration Suite PC software.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent damage.

5. TROUBLESHOOTING

This section provides guidance on common issues you might encounter with the DSE3110 controller.

Problem	Possible Cause	Solution
Controller display is blank.	No power supply; Blown fuse; Faulty wiring.	Check DC power supply connections and voltage. Inspect fuses. Verify wiring integrity.
Generator fails to start in Auto mode.	No remote start signal; Module not in Auto mode; Engine fault.	Verify remote start signal is active. Ensure the Auto button is pressed. Check LCD for engine fault messages.
Generator starts but immediately shuts down.	Active protection alarm (e.g., low oil pressure, high temperature).	Check the LCD display for specific alarm messages. Address the underlying engine fault. Reset the controller by pressing the Stop/Reset button.

Problem	Possible Cause	Solution
Incorrect readings on display (e.g., voltage, frequency).	Incorrect configuration; Faulty sensor/wiring.	Verify configuration settings using DSE Configuration Suite. Check sensor connections and sensor functionality.

If the issue persists after attempting these solutions, please contact technical support.

6. SPECIFICATIONS

Specification	Detail
Model Number	DSE3110
Brand	Graigar
Item Weight	9.6 ounces (0.6 Pounds)
Product Dimensions	3.9 x 3.1 x 1.6 inches (3.9"L x 2.68"W)
Display Type	LCD
Color	Black
Material	Plastic
Voltage	70 Volts (Max AC Volts Input 277Vac)
DC Supply	8-35V, 0.5A
DC Outputs	30V, 2A Max
DC Inputs	30V Max
Charge Alternator	30V, 2.5W Max
CAN Port	5V Max
Mag Pickup	70V, 10kHz Max
Batteries Required	No
Included Components	DSE3110 Controller

7. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Deep Sea Electronics documentation or contact Graigar customer service. You can also visit the Deep Sea Electronics website for additional resources and software downloads.

- Official Deep Sea Electronics Website: www.deepseapl.com
- For US-specific information: www.deepseausa.com

Please have your product model number (DSE3110) and serial number ready when contacting support.



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