CZPBXOX DSE4520 MKII

CZPBXOX DSE4520 MKII Auto Mains (Utility) Failure Control Module User Manual

Model: DSE4520 MKII
Brand: CZPBXOX

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of the CZPBXOX DSE4520 MKII Auto Mains (Utility) Failure Control Module. The DSE4520 MKII is a compact control module designed to provide comprehensive features for genset power control, including Auto Mains Failure (AMF) and Auto Start functionalities. It is suitable for a wide range of generator applications.

2. Safety Information

Warning: Installation and servicing of this equipment should only be performed by qualified personnel. Failure to observe this precaution may result in serious injury or death. Always disconnect power before performing any installation or maintenance procedures.

Ensure all local and national electrical codes are followed during installation. This device operates with electrical voltages that can be hazardous.

3. Product Overview

The DSE4520 MKII is an advanced control module offering a robust set of features for generator management. It can be configured for both Auto Start and Auto Mains Failure (AMF) applications, providing flexibility for various power system requirements.

Key Features:

- Load unbalanced alarm

- Configurable for use as an auto start and AMF control module
- J1939-75 support and CAN alarm ignore function
- Alternator frequency & CAN speed sensing in one variant
- Largest backlit icon display in its class
- Heated display option
- Real time clock provides accurate event logging
- Fully configurable via the fascia or PC using USB communication
- Extremely efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing
- Compatible with 600 V ph to ph nominal systems
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Fuel and start outputs (configurable when using CAN)
- 4 configurable DC outputs
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs
- Configurable staged loading outputs
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Tier 4 engine instrumentation

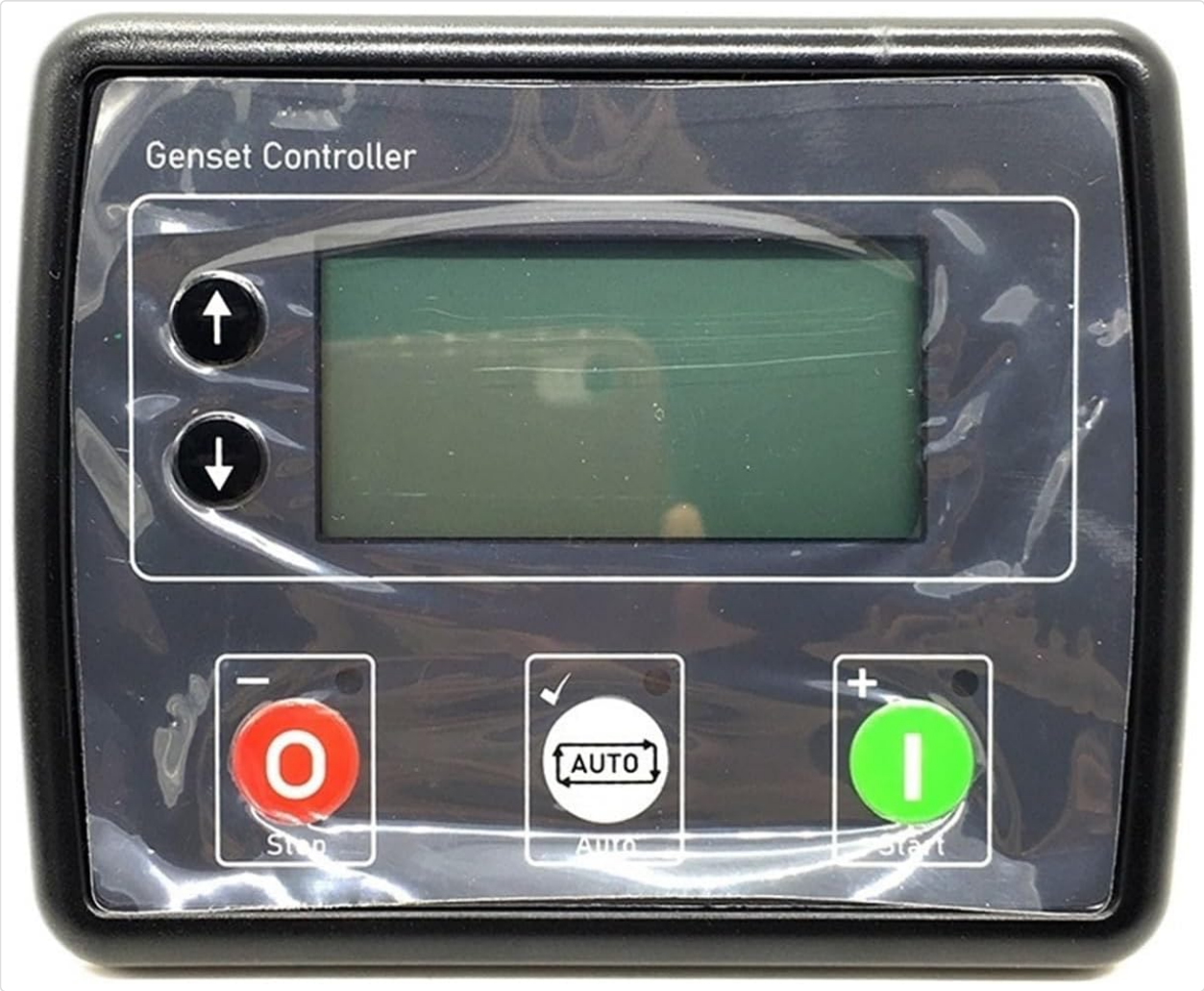

Image 3.1: Front view of the DSE4520 MKII Genset Controller, showing the display screen, navigation buttons (up/down), and control buttons (Stop, Auto, Start).

Image 3.2: The DSE4520 MKII controller shown with its mounting clips and a portion of an instruction manual, illustrating the components included for installation.

Image 3.3: An angled perspective of the DSE4520 MKII controller, highlighting its compact design and button layout.

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4. Setup and Installation

4.1 Physical Dimensions:

- **Overall Size:** 140 mm x 113 mm x 43 mm (5.5" x 4.4" x 1.5")
- **Panel Cutout Size:** 118 mm x 92 mm (4.6" x 3.6")
- **Maximum Panel Thickness:** 8.0 mm (0.3")
- **Weight:** 0.26 kg

4.2 Mounting:

Mount the module into a panel cutout of the specified dimensions. Secure the module using the provided mounting clips. Ensure adequate clearance for wiring at the rear of the unit.

4.3 Wiring:

Connect all necessary power, input, and output wiring according to the wiring diagrams provided in the full product manual (not included here). Pay close attention to polarity and voltage ratings. Use appropriate gauge wiring for all connections.

Image 4.1: Rear view of the DSE4520 MKII controller, displaying the various green terminal blocks for electrical connections and the USB communication port.

Image 4.2: A detailed close-up of the DSE4520 MKII's rear panel, showing the numbered terminal blocks and printed electrical specifications for DC supply, outputs, inputs, AC voltage/current, charge alternator, magnetic pickup, and comms port.

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5. Operating Instructions

5.1 Basic Operation:

- **Start Button (Green 'I'):** Press to initiate the generator start sequence in Manual mode.
- **Stop Button (Red 'O'):** Press to stop the generator in Manual mode or to clear alarms.
- **Auto Button (White 'AUTO'):** Press to place the module in Auto mode, allowing it to automatically start and stop the generator based on configured events (e.g., mains failure).
- **Navigation Buttons (Up/Down Arrows):** Use these buttons to scroll through display screens and access parameters for configuration.

5.2 Configuration:

The module can be fully configured either directly via the fascia buttons and display or by connecting it to a PC using a USB communication cable and the appropriate DSE configuration software. Refer to the software manual for detailed PC configuration instructions.

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6. Maintenance

The DSE4520 MKII includes features such as engine hours counter and configurable engine maintenance alarms to assist with routine servicing. Regular maintenance of the generator set, as recommended by the

engine manufacturer, is crucial for reliable operation.

- Periodically inspect all wiring connections for tightness and corrosion.
- Keep the module clean and free from dust and moisture.
- Monitor engine maintenance alarms and address them promptly.

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7. Troubleshooting

In case of operational issues, the DSE4520 MKII provides a real-time clock for accurate event logging, which can be invaluable for diagnosing problems. Review the event log via the module's display or PC software to identify the sequence of events leading to a fault.

- **No Display/Power:** Check DC supply voltage and connections.
- **Generator Fails to Start:** Verify fuel level, battery charge, engine stop solenoid, and starter motor connections. Check for active alarms.
- **Mains Failure Not Detected:** Ensure mains sensing connections are correct and within specified voltage ranges.
- **Alarm Active:** Use the navigation buttons to view the alarm message on the display. Consult the full manual for specific alarm codes and troubleshooting steps.

The CAN alarm ignore function can be configured to bypass certain non-critical CAN alarms if necessary, but this should be done with caution and full understanding of its implications.

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8. Specifications

Parameter	Value
Overall Size	140 mm x 113 mm x 43 mm (5.5" x 4.4" x 1.5")
Panel Cutout Size	118 mm x 92 mm (4.6" x 3.6")
Maximum Panel Thickness	8.0 mm (0.3")
Weight	0.26 kg
DC Supply	8-35V, 0.5A Max
DC Outputs	30V, 5A (3-4) 2A (6-9)
DC Inputs	30V Max
AC Voltage Inputs	600Vac, 50/60Hz, 1-3 ph
AC Current Inputs	5A, 50/60Hz, 1-3 ph
Charge Alternator	30V, 2.5W Max
Magnetic Pickup	70V, 10kHz Max
Comms Port	5V Max

Copy DSE4520

Original DSE4520MKII

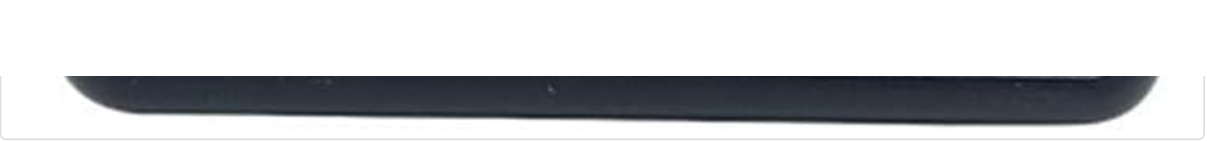

Image 8.1: A visual comparison between a 'Copy DSE4520' (top) and an 'Original DSE4520MKII' (bottom). This manual pertains to the DSE4520 MKII variant as described in the product listing.

9. Warranty and Support

For warranty information, please refer to the terms and conditions provided by your seller or the manufacturer at the time of purchase. Specific warranty details are not included in this general instruction manual.

For technical support or further assistance, please contact your product supplier or the manufacturer directly. Ensure you have your product model number and purchase details available when seeking support.