

ZY-CC100DC12/24v-c3/C2 Dzl35

ZY-CC100DC12/24v-c3/C2 Dzl35 Car Refrigerator Compressor Driver Module Instruction Manual

Model: ZY-CC100DC12/24v-c3/C2 Dzl35

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the ZY-CC100DC12/24v-c3/C2 Dzl35 Car Refrigerator Compressor Driver Module. This module is designed to control and drive compressors in vehicle cooling systems, offering features such as speed regulation, adaptation, and comprehensive protection. Please read this manual thoroughly before installation and use.

2. SAFETY INFORMATION

- **Electrical Safety:** Ensure all power connections are secure and correctly polarized. Disconnect power before performing any installation or maintenance.
- **Voltage Compatibility:** This module operates with DC 12V/24V systems. Verify your vehicle's electrical system voltage before connection.
- **Professional Installation:** Installation should be performed by qualified personnel to prevent damage to the module or the vehicle's electrical system.
- **Environmental Conditions:** Avoid exposing the module to extreme temperatures, moisture, or corrosive environments.

3. PRODUCT OVERVIEW AND FEATURES

The ZY-CC100DC12/24v-c3/C2 Dzl35 is a frequency conversion driver module for car refrigerator compressors. Its key functions include:

- **Speed Regulation Function:** Automatically adjusts the motor speed according to the compressor's operational requirements, enabling precise flow and pressure control.
- **Adaptation Function:** Designed for wide compatibility with various compressor brands and models, facilitating easy replacement and upgrades. Users should provide their specific compressor model for optimal adaptation.
- **Drive Function:** Serves as the central control component, converting electrical energy into mechanical energy to ensure the compressor's normal operation.
- **Monitoring Function:** Provides real-time monitoring of compressor operating status and parameters, including current, voltage, and temperature, aiding in fault diagnosis and performance optimization.
- **Protection Function:** Incorporates multiple safety features such as overload protection, short circuit

protection, and undervoltage protection. These functions ensure the compressor safely shuts down under abnormal conditions, preventing equipment damage.



Figure 1: ZY-CC100DC12/24v-c3/C2 Dzl35 Car Refrigerator Compressor Driver Module. This image shows the black, finned heat sink design of the module, with a white connector visible at the bottom right. The fins are designed for heat dissipation, and connection labels are faintly visible on the side.

4. SETUP AND INSTALLATION

Proper installation is crucial for the module's performance and longevity. It is highly recommended that

installation be performed by a certified technician.

4.1 Pre-Installation Checks

- Verify that the vehicle's power supply is DC 12V or DC 24V.
- Ensure the compressor model is compatible with the ZY-CC100DC12/24v-c3/C2 Dzl35 module.
- Disconnect the vehicle's battery before starting any electrical work.

4.2 Wiring Instructions

Connect the module to the compressor and the vehicle's power supply according to the wiring diagram provided with your specific compressor or vehicle cooling system. Pay close attention to polarity (+ and -) and ensure all connections are firm and insulated to prevent short circuits.

- **Power Input:** Connect to the vehicle's DC 12V or 24V power source.
- **Compressor Output:** Connect to the compressor's input terminals.
- **Control Signals:** Connect any necessary control signals (e.g., thermostat input) as per your system's requirements.

Secure the module in a location that allows for adequate ventilation, away from direct heat sources and moisture. The finned design aids in heat dissipation, so ensure airflow is not obstructed.

5. OPERATING INSTRUCTIONS

Once installed, the module operates automatically to manage the compressor. The frequency conversion technology allows for efficient and precise cooling.

- **Initial Power-Up:** After installation, reconnect the vehicle's battery. The module will perform an initial self-check.
- **Automatic Operation:** The module will automatically adjust the compressor's speed based on the cooling demand, optimizing energy consumption and maintaining the desired temperature.
- **Monitoring:** The module continuously monitors parameters like current, voltage, and temperature. In case of anomalies, its protection functions will activate.

6. MAINTENANCE

The ZY-CC100DC12/24v-c3/C2 Dzl35 module is designed for low maintenance. Regular checks can help ensure optimal performance.

- **Visual Inspection:** Periodically inspect the module and its connections for any signs of damage, corrosion, or loose wiring.
- **Cleaning:** Keep the module's heat sink fins clean and free of dust or debris to ensure efficient heat dissipation. Use a soft, dry cloth for cleaning.
- **Connection Integrity:** Ensure all electrical connections remain tight and secure.

7. TROUBLESHOOTING

The module includes built-in protection features to prevent damage. If the compressor system is not functioning correctly, consider the following:

- **No Compressor Operation:**
 - Check power supply: Ensure the module is receiving the correct DC 12V/24V input.

- Check connections: Verify all wiring to the compressor and power source is secure.
- Overload/Short Circuit Protection: If the module has activated its protection, disconnect power, inspect the compressor and wiring for faults, and then reconnect.
- **Intermittent Operation:**
 - Undervoltage Protection: Check the vehicle's battery voltage. If it's too low, the module may shut down to protect the system.
 - Overheating: Ensure the module has adequate ventilation and its fins are clean.
- **Unusual Noises:** This is typically related to the compressor itself or its mounting, not the driver module.

If issues persist after checking these points, consult a qualified technician or the product supplier.

8. SPECIFICATIONS

Feature	Specification
Model	ZY-CC100DC12/24v-c3/C2 Dz135
Input Voltage	DC 12V / 24V
Item Weight	1.76 ounces
Package Dimensions	0.39 x 0.39 x 0.39 inches
Manufacturer Part Number	YUZBUURYX
Exterior	Brushed

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided at the time of purchase or contact your retailer directly. Keep your purchase receipt as proof of purchase.