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Danfoss EKC202B

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1. INTRODUCTION

This instruction manual provides essential information for the safe and efficient installation, operation, and maintenance of the Danfoss EKC202B Refrigeration Control Unit (Model 084B8522). Please read this manual thoroughly before attempting any installation or operation to ensure proper function and to prevent damage to the unit or associated equipment.

The Danfoss EKC202B is designed for precise temperature control in various refrigeration applications, featuring automatic defrost capabilities and adjustable temperature settings.

2. SAFETY INFORMATION

- **Electrical Hazard:** Always disconnect power to the unit and associated equipment before performing any installation, wiring, or maintenance. Failure to do so can result in serious injury or death.
- **Qualified Personnel:** Installation and servicing should only be performed by qualified and authorized personnel familiar with electrical systems and refrigeration equipment.
- **Proper Grounding:** Ensure the unit is properly grounded according to local and national electrical codes.
- **Environmental Conditions:** Do not expose the unit to excessive moisture, dust, or extreme temperatures outside its specified operating range.
- **Original Parts:** Use only original Danfoss spare parts and accessories.

3. PRODUCT OVERVIEW

The Danfoss EKC202B is a compact refrigeration control unit. It features a front-mounted display for monitoring and adjusting parameters, and rear-mounted terminal blocks for electrical connections.



This image shows the Danfoss EKC202B refrigeration control unit. The front panel features a display, while the rear side is equipped with multiple green terminal blocks for electrical connections. The unit is housed in a black casing.

Key Components:

- **Display Panel:** Shows current temperature, status, and menu options.
- **Control Buttons:** For navigation and parameter adjustment.
- **Terminal Blocks:** For power supply, sensor inputs, and output connections (e.g., compressor, fan, defrost heater).

4. SETUP AND INSTALLATION

4.1 Mounting

The EKC202B is designed for freestanding installation, typically panel-mounted. Ensure adequate space for ventilation and access to wiring terminals. Secure the unit firmly using appropriate mounting hardware.

4.2 Electrical Connections

WARNING: Ensure power is disconnected before wiring.

1. Connect the main power supply (230V AC, 50/60Hz) to the designated power terminals. Refer to the

wiring diagram on the unit's label or in the full technical documentation for precise terminal assignments.

2. Connect temperature sensors to the appropriate input terminals. Ensure sensors are correctly placed within the refrigeration system for accurate readings.
3. Connect control outputs (e.g., compressor, fan, defrost heater) to their respective terminals. Verify that the load ratings of connected devices do not exceed the unit's output specifications.
4. Ensure all connections are secure and properly insulated.

4.3 Initial Power-Up

After all connections are verified, restore power to the unit. The display should illuminate, indicating the unit is operational. The unit will typically show the current measured temperature.

5. OPERATING INSTRUCTIONS

5.1 Setting the Temperature

The EKC202B features adjustable temperature control. Typically, a dedicated button (often labeled 'Set' or similar) allows access to the setpoint adjustment. Use the up/down arrow buttons to change the desired temperature, then confirm the setting.

5.2 Menu Navigation

The unit's menu system allows access to various parameters such as defrost cycles, alarm settings, and sensor calibration. Consult the detailed technical manual for specific menu structures and parameter definitions. Use the navigation buttons to scroll through options and adjust values.

5.3 Automatic Defrost

The EKC202B is equipped with an automatic defrost system. Defrost cycles are typically initiated based on time intervals or evaporator temperature. Parameters for defrost duration and frequency can usually be adjusted within the unit's menu.

6. MAINTENANCE

6.1 Cleaning

Keep the exterior of the control unit clean. Use a soft, damp cloth for cleaning. Do not use abrasive cleaners, solvents, or excessive moisture, as these can damage the unit.

6.2 Inspection

Periodically inspect all electrical connections for tightness and signs of corrosion or damage. Ensure that ventilation openings are clear of obstructions. Any signs of damage or malfunction should be addressed by qualified service personnel.

The Danfoss EKC202B contains no user-serviceable parts internally. Do not attempt to open the unit casing.

7. TROUBLESHOOTING

Before contacting technical support, perform the following basic checks:

- **No Display/No Power:** Check the main power supply and all power connections. Verify that the circuit breaker or fuse is not tripped.
- **Incorrect Temperature Reading:** Ensure temperature sensors are correctly connected and positioned.

Check for sensor damage.

- **Unit Not Controlling:** Verify that the setpoint temperature is correctly configured. Check wiring to the compressor or other controlled devices.
- **Error Codes:** If an error code appears on the display, refer to the full technical manual for a list of codes and their corresponding troubleshooting steps.

If the issue persists after performing these checks, contact a qualified service technician or Danfoss technical support.

8. SPECIFICATIONS

Brand	Danfoss
Model Number	084B8522
Product Name	EKC202B Refrigeration Control Unit
Power Supply	230V AC, 50/60Hz
Defrost System	Automatic
Adjustable Temperature Control	Yes
Installation Type	Freestanding
Color	Gray (Unit casing is black)

9. WARRANTY AND SUPPORT

The Danfoss EKC202B Refrigeration Control Unit is covered by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official Danfoss website.

For technical assistance, spare parts, or service inquiries, please contact your authorized Danfoss distributor or Danfoss customer support. When contacting support, please have your model number (084B8522) and serial number readily available.