Danfoss 077B0020

Danfoss 25T65 Refrigerator Thermostat (Model 077B0020) User Manual

Model: 077B0020 | Brand: Danfoss

1. Introduction

This user manual provides essential information for the safe and efficient installation, operation, and maintenance of your Danfoss 25T65 Refrigerator Thermostat, model 077B0020. This thermostat is designed for precise temperature control within refrigeration units. Please read this manual thoroughly before installation and use, and retain it for future reference.

2. Safety Information

Warning: Electrical shock hazard. Installation and servicing should only be performed by qualified personnel. Disconnect power before installing or servicing the thermostat.

- Ensure all local and national electrical codes are followed during installation.
- Do not operate the thermostat if it appears damaged.
- Keep the thermostat away from water and excessive moisture.
- This device is intended for use in refrigeration systems as specified. Do not use for purposes other than its intended application.

3. Product Overview

The Danfoss 25T65 Refrigerator Thermostat (Model 077B0020) is a standard component for regulating temperature in various refrigeration applications. It features a capillary tube for sensing temperature and electrical terminals for connection to the refrigeration system's compressor and power supply.

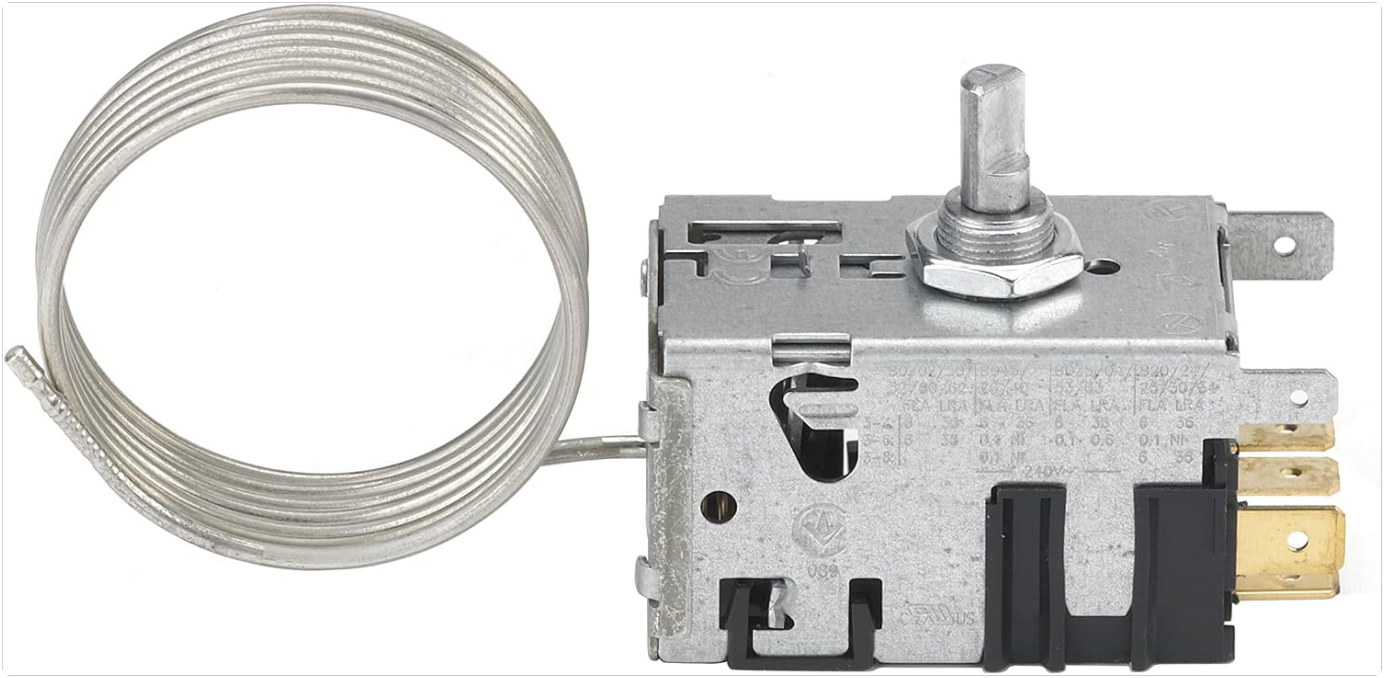

Figure 1: Front view of the Danfoss 25T65 Refrigerator Thermostat, showing the main body and the coiled capillary tube used for temperature sensing.

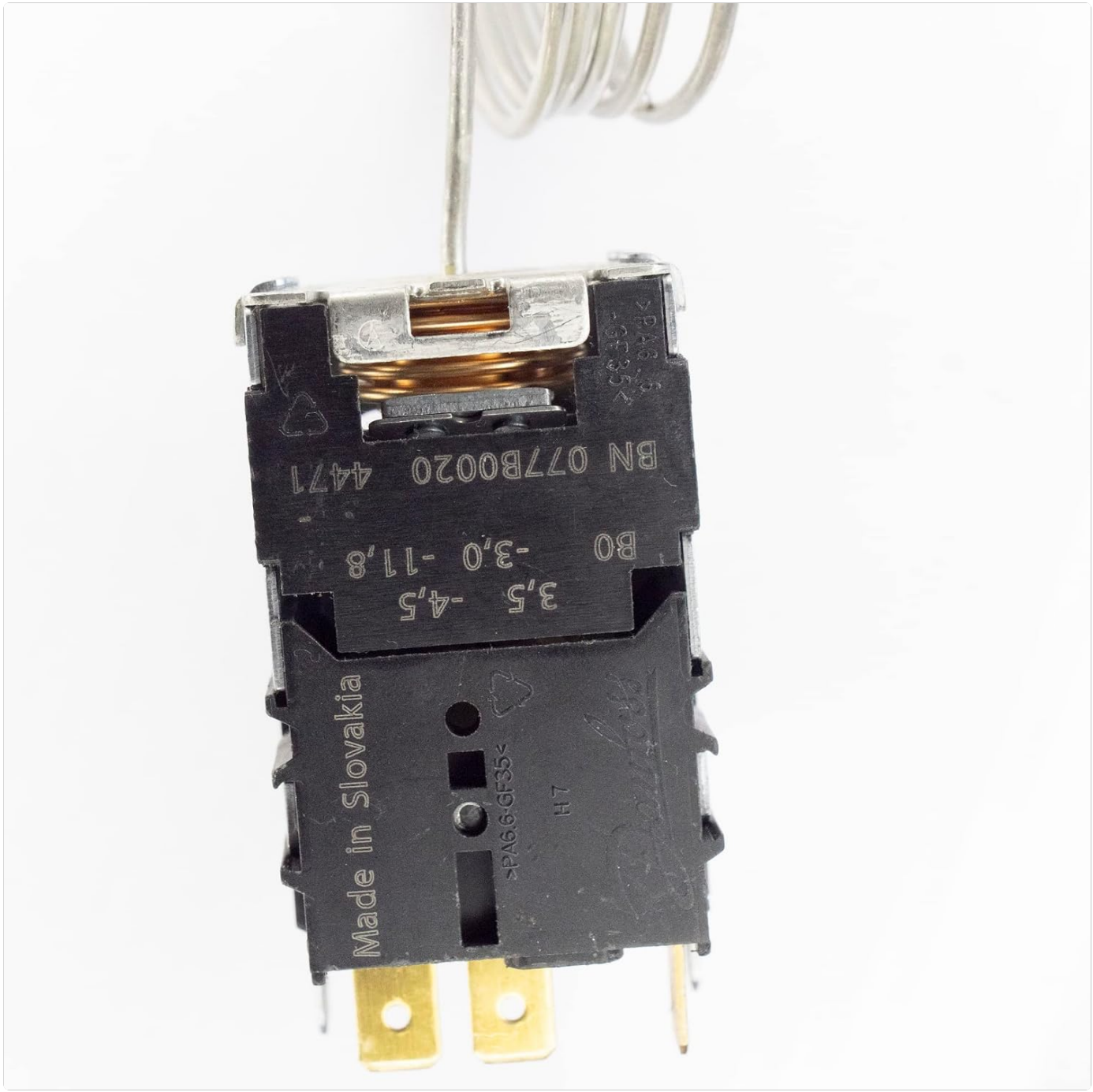

Figure 2: Rear view of the thermostat, displaying the model number (BN 077B0020) and manufacturing origin ("Made in Slovakia").

4. Specifications

Feature	Specification
Brand	Danfoss
Model Number	077B0020
Reference Number	077B6321
Capillary Tube Length	1000 mm
Connection Terminals	6.3 mm
Temperature Range (Cold)	4.5 °C to -4.5 °C (23.9 °F to 10.8 °F)

Feature	Specification
Temperature Range (Hot)	3.5 °C to -3 °C (38.3 °F to 26.6 °F)
Housing Dimensions (approx.)	60 x 30 x 25 mm
Insulation Resistance	> 50 mOhm
Certification	EN60730-2-9
Power Type	Wired
Display Type	Digital (Note: Physical interface is typically an analog dial for setting)
Material	Plastic

5. Setup and Installation

Installation of the Danfoss 25T65 Refrigerator Thermostat requires technical knowledge and should be performed by a qualified technician. Incorrect installation can lead to equipment damage or personal injury.

5.1 Pre-Installation Checks

- Verify that the thermostat model (077B0020) is compatible with your refrigeration unit.
- Ensure the power supply to the refrigeration unit is disconnected before starting.
- Gather necessary tools (e.g., screwdrivers, wire strippers, multimeter).

5.2 Installation Steps (General Guidance)

1. **Remove Old Thermostat:** Carefully disconnect wiring and remove the existing thermostat, noting the position of each wire.
2. **Mount New Thermostat:** Secure the Danfoss 25T65 thermostat in the designated mounting location within the refrigeration unit.
3. **Connect Wiring:** Connect the electrical wires to the 6.3 mm terminals on the new thermostat according to the refrigeration unit's wiring diagram. Ensure connections are secure.
4. **Position Capillary Tube:** Route the 1000 mm capillary tube to the temperature sensing area within the refrigerator compartment. Ensure it is not kinked or damaged.
5. **Secure Connections:** Double-check all electrical connections for tightness and proper insulation.
6. **Restore Power:** Once installation is complete and verified, restore power to the refrigeration unit.

Figure 3: Close-up view of the 6.3 mm electrical terminals on the thermostat, where power and compressor connections are made.

6. Operating Instructions

The Danfoss 25T65 thermostat controls the refrigeration cycle based on the temperature sensed by its capillary tube. Temperature adjustment is typically done via a control knob connected to the thermostat shaft.

6.1 Setting Temperature

- Locate the temperature control knob, usually found on the front panel of the refrigeration unit, which is connected to the thermostat's shaft.

- Rotate the knob to the desired temperature setting. Lower numbers or "colder" settings typically correspond to lower temperatures.
- Allow several hours for the refrigeration unit to stabilize at the new temperature setting.
- The thermostat will automatically cycle the compressor on and off to maintain the set temperature within the specified range.

Figure 4: Side view illustrating the control shaft, to which a temperature adjustment knob is typically attached.

7. Maintenance

The Danfoss 25T65 thermostat is designed for reliable operation with minimal maintenance. However, periodic checks can help ensure its longevity and proper function.

- **Cleaning:** Ensure the area around the thermostat and its capillary tube is free from dust and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically inspect the capillary tube for any signs of damage, kinks, or corrosion. Ensure it is securely positioned in the sensing area.
- **Electrical Connections:** With power disconnected, occasionally check electrical connections for tightness. Loose connections can lead to intermittent operation or failure.
- **Professional Check:** For complex issues or if you suspect a malfunction, consult a qualified refrigeration technician.

8. Troubleshooting

If your refrigeration unit is not maintaining the desired temperature, the thermostat may be a contributing factor. Here are some basic troubleshooting steps:

- **Refrigerator Not Cooling:**
  - Check if the thermostat is set to a sufficiently cold setting.
  - Ensure the capillary tube is correctly positioned and not damaged.
  - Verify power supply to the refrigeration unit and thermostat.
  - Inspect electrical connections for looseness or corrosion.
- **Refrigerator Too Cold / Freezing:**
  - Adjust the thermostat to a warmer setting.
  - Ensure the capillary tube is not in direct contact with the evaporator or a very cold surface, which could cause it to sense an artificially low temperature.
- **Thermostat Not Cycling:**
  - If the compressor runs continuously or not at all, the thermostat may be faulty.
  - Consult a qualified technician for diagnosis and replacement if necessary.

For issues beyond these basic checks, professional assistance is recommended.

9. Warranty and Support

Information regarding specific warranty terms for the Danfoss 25T65 Refrigerator Thermostat (Model 077B0020) is typically provided at the point of purchase or can be found on the official Danfoss website. Please retain your proof of purchase for warranty claims.
Regarding spare parts availability, the provided product information indicates that "Information on spare parts is unavailable." For technical support or service inquiries, please contact Danfoss customer service or an authorized Danfoss distributor.
You can often find contact information and further resources on the official Danfoss website:www.danfoss.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

Why is my Rosière RDP28RB refrigerator compressor running continuously without cooling while the capillary tube end of the thermostat is damaged?

Based on your description of the Rosière RDP28RB, the symptoms you are experiencing are classic signs of a failed thermostat or a refrigerant leak. However, the physical damage to the capillary tube is the...

Read full answer