Danfoss 077B6806

Danfoss 077B6806 Temperature Control User Manual

Model: 077B6806

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Danfoss 077B6806 Temperature Control unit. Please read these instructions carefully before using the device and retain them for future reference.



Image of the Danfoss 077B6806 Temperature Control unit, showing its compact design and dial.

2. Safety Information

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read these instructions thoroughly before installing or servicing this equipment.

- Always disconnect power before performing any installation or maintenance.

- Ensure all wiring complies with local and national electrical codes.
- This device should only be installed by qualified personnel.
- Do not operate the unit if it appears damaged.
- Keep the unit away from water and excessive moisture.

3. Package Contents

Verify that all items are present and undamaged upon unpacking:

- Danfoss 077B6806 Temperature Control Unit
- Mounting Screws (Qty 2)
- Instruction Manual (this document)

4. Setup and Installation

The Danfoss 077B6806 is designed for flange mounting.

4.1 Mounting

1. Select a suitable location for mounting, ensuring adequate ventilation and access for maintenance.
2. Position the control unit and mark the mounting centers. The mounting centers are approximately 2.2 inches (55.9 mm) apart.
3. Drill pilot holes if necessary.
4. Secure the unit using the two provided mounting screws.

4.2 Sensor Bulb Placement

The unit features a straight bulb with a capillary length of 72.5 inches. Ensure the bulb is placed in the area where temperature control is required, providing accurate temperature sensing. Avoid kinking or damaging the capillary tube during placement.

4.3 Electrical Connection

Connect the temperature control unit to the electrical system according to the wiring diagram provided with your specific application. The shaft is 3.98mm (.156") flat. If it is a "GE" brand thermostat, the shaft is slotted 2 prong. Ensure all connections are secure and insulated.

5. Operating Instructions

The Danfoss 077B6806 Temperature Control unit features a simple dial for temperature adjustment.

1. **Power On:** Ensure the unit is properly installed and connected to power.
2. **Adjusting Temperature:** Rotate the dial to set the desired temperature. The dial typically ranges from "Colder" (0) to "Warmer" (8).
    - Cold Out: Approximately 7.1°F
    - Normal Out: Approximately 14.5°F / In: 35°F
    - Warm In: Approximately 21.1°F

    The measuring range for this unit is 7.1°F to 72.5°F.
3. **Monitoring:** The unit will automatically regulate the temperature based on the dial setting and sensor bulb readings.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your temperature control unit.

- **Cleaning:** Periodically wipe the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect the capillary tube and sensor bulb for any signs of damage or kinking. Check electrical connections for tightness.
- **Calibration:** If you suspect inaccurate readings, consult a qualified technician for calibration.

7. Troubleshooting

If you encounter issues with your Danfoss 077B6806, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Unit not powering on	No power supply; loose wiring	Check power source; verify all electrical connections are secure.
Incorrect temperature reading/control	Improper sensor bulb placement; damaged capillary; incorrect dial setting	Ensure bulb is correctly positioned; inspect capillary for damage; adjust dial setting.
Unit cycles too frequently or infrequently	Improper differential setting (if adjustable); environmental factors	Consult a qualified technician for advanced adjustments or diagnosis.

For issues not listed above, or if troubleshooting steps do not resolve the problem, contact Danfoss customer support or a qualified service technician.

8. Specifications

Feature	Detail
Brand	Danfoss
Model Number	077B6806 (also known as 46-1566)
Material	Metal
Item Weight	13.44 ounces (0.84 lbs)
Style	Modern
Measuring Range	7.1°F to 72.5°F
Lower Temperature Rating	7.1°F
Upper Temperature Rating	72.5°F
Measurement Accuracy	±1.5%
Mounting Type	Flange Mount
Output Type	Push Button, Analog
Capillary Length	72.5 inches

Feature	Detail
Shaft Dimensions	3.98mm / .156" Flat (Slotted 2 Prong for "GE" brand T-STAT)
Mounting Centers	2.2" / 55.9 mm

9. Warranty and Support

For warranty information, please refer to the documentation provided at the time of purchase or visit the official Danfoss website.
For technical support, spare parts, or service inquiries, please contact Danfoss customer service. You can often find contact details on the official Danfoss website or through your local distributor.
Danfoss Official Website: www.danfoss.com

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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.

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