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DIXELL XR40CX-5N1C1 Temperature Controller User Manual

Model: XR40CX-5N1C1 | Brand: Dixell

1. INTRODUCTION

The Dixell XR40CX-5N1C1 is a digital thermostat designed for refrigerated applications at normal temperatures. This microprocessor-based controller, in a 32x74mm format, offers precise temperature management and control functionalities. It features two relay outputs: one for compressor control and another configurable for alarm signaling or auxiliary output. The unit also includes two NTC or PTC probe inputs, with the first dedicated to temperature control and the second optional, for condenser temperature alarm signaling or temperature display via the HOT KEY terminals. The instrument is fully configurable via its keyboard.

This manual provides essential information for the proper installation, operation, and maintenance of your XR40CX-5N1C1 temperature controller.

2. PRODUCT OVERVIEW

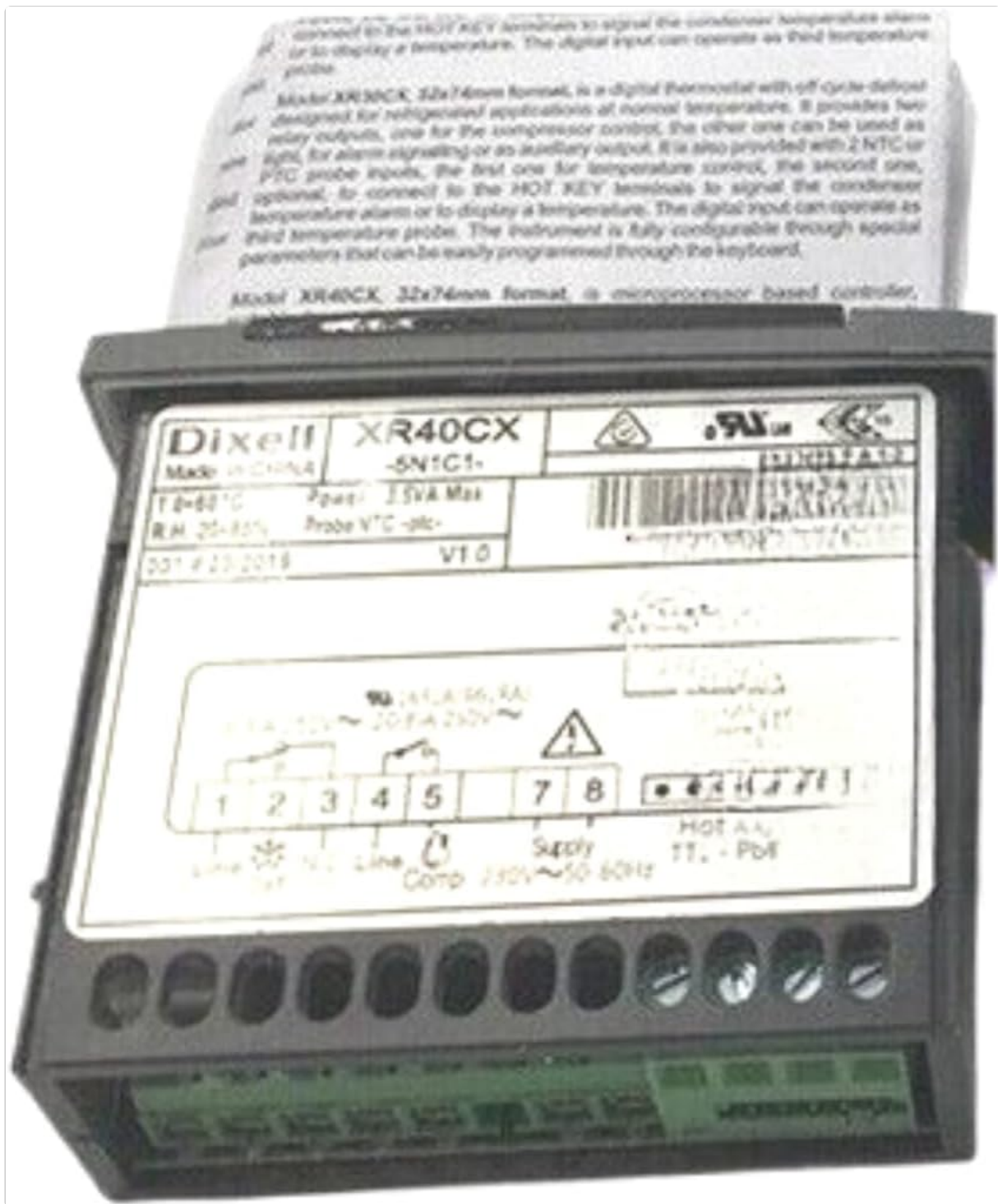


Figure 1: Front and terminal view of the Dixell XR40CX-5N1C1 Temperature Controller. This image shows the product label with model number, power specifications, and the terminal block for wiring connections.

The XR40CX-5N1C1 features a clear display (LCD or LED) for temperature readings and status indicators. The rear panel includes a terminal block for electrical connections, as detailed in the setup section.

- **Model:** XR40CX-5N1C1
- **Power Supply:** 120V~ 50-60Hz (as indicated on the label, check specific unit for exact voltage)
- **Power Consumption:** 3.5VA Max
- **Probe Inputs:** NTC or PTC (for temperature control and optional condenser temperature alarm/display)
- **Relay Outputs:** Compressor, Auxiliary/Alarm
- **Display Style:** LCD or LED

3. SETUP AND INSTALLATION

3.1 Safety Precautions

- Disconnect all power before installation or maintenance.
- Ensure wiring complies with local electrical codes.
- Do not expose the device to water or excessive humidity.
- Install in a location free from vibrations and corrosive atmospheres.

3.2 Mounting

The XR40CX-5N1C1 is designed for panel mounting. Cut a standard 32x74mm opening in the panel. Insert the controller and secure it using the provided clips.

3.3 Electrical Connections

Refer to the wiring diagram on the product label (Figure 1) and the following instructions for proper electrical connections. All connections should be made with appropriate gauge wiring.

Table 1: Terminal Connections

Terminal No.	Description
1, 2	Line (Power Input)
3, 4	Compressor Relay Output
5	Common for Relay Outputs
7, 8	Supply (Power Input) - 120V~ 50-60Hz
Hot A/N, T.T. P.B	Hot Key / Probe B (Specific function depends on configuration)

Note: The exact wiring configuration may vary based on the specific application and model variant. Always consult the detailed wiring diagram on your unit's label and any accompanying documentation.

4. OPERATING INSTRUCTIONS

4.1 Powering On

Once wired correctly, apply power to the unit. The display will illuminate, showing the current temperature or a default message.

4.2 Setting the Setpoint

The setpoint is the desired temperature. The exact procedure for setting the setpoint involves navigating through the menu using the front panel buttons. Typically, this involves pressing a 'SET' button, using arrow keys to adjust the value, and then confirming the selection.

4.3 Parameter Configuration

The XR40CX-5N1C1 is highly configurable through special parameters accessible via the keyboard. These parameters control various aspects such as defrost cycles, alarm thresholds, probe types (NTC/PTC), and relay output functions. Refer to the comprehensive programming manual (if available separately) for a complete list and explanation of all parameters.

- **Compressor Control:** The primary relay output manages the compressor based on the setpoint and differential.
- **Defrost Function:** The controller supports off-cycle defrost, which can be configured through parameters.
- **Alarm Functions:** The second relay output can be configured for alarm signaling (e.g., high/low temperature, condenser temperature).
- **HOT KEY:** The HOT KEY terminals can be used to signal a condenser temperature alarm or to display a temperature, depending on configuration.

5. MAINTENANCE

5.1 Cleaning

Clean the front panel with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the device.

5.2 Probe Inspection

Periodically inspect temperature probes for damage or corrosion. Ensure they are securely connected and positioned correctly for accurate temperature readings.

5.3 Electrical Connections Check

Occasionally check all electrical connections for tightness and signs of wear or overheating. Disconnect power before performing this check.

6. TROUBLESHOOTING

- **Display is blank:** Check power supply connections and ensure the unit is receiving power.
- **Incorrect temperature reading:** Verify probe connections and ensure the correct probe type (NTC/PTC) is configured in the parameters. Check for probe damage.
- **Compressor not cycling:** Check setpoint and differential settings. Verify compressor relay output wiring. Ensure no alarms are active preventing operation.
- **Alarm active:** Identify the alarm code on the display (if any) and consult the programming manual for its meaning. Address the underlying condition (e.g., high temperature, probe error).

For persistent issues, contact technical support or a qualified technician.

7. TECHNICAL SPECIFICATIONS

- **Model:** XR40CX-5N1C1
- **Dimensions:** 32x74mm panel mount
- **Power Supply:** 120V~ 50-60Hz (Refer to unit label for specific voltage)
- **Power Consumption:** 3.5VA Max
- **Operating Temperature Range:** -10°C to 60°C (14°F to 140°F)
- **Relative Humidity:** 20-85% (non-condensing)
- **Probe Inputs:** 2 (NTC or PTC configurable)
- **Relay Outputs:** 2 (Compressor, Auxiliary/Alarm)
- **Display:** LCD or LED

- **Origin:** Made in China
- **Firmware Version:** V1.0 (as per label 031423-2018 V1.0)

8. WARRANTY AND SUPPORT

This product comes with a **180-day warranty** from the date of purchase. This warranty covers manufacturing defects under normal use. It does not cover damage caused by improper installation, misuse, or unauthorized modifications.

For technical support, warranty claims, or further assistance, please contact your supplier or the manufacturer's authorized service center. Please have your model number (XR40CX-5N1C1) and purchase details ready.