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ICM Controls ICM550C

ICM ICM550 Defrost Control Timer User Manual

Model: ICM550C

INTRODUCTION

The ICM ICM550 Defrost Control Timer is an advanced electronic control module designed to manage defrost cycles in refrigeration systems. It provides precise timing for defrost operations, ensuring efficient system performance and preventing ice buildup on evaporator coils. This manual provides detailed instructions for the installation, operation, and maintenance of your ICM550 unit.

PRODUCT FEATURES AND PACKAGE CONTENTS

The ICM550 Defrost Control Timer comes with the following components and features:

- ICM550 defrost control module and Bracket mount
- Installation guide
- Terminal block & wiring diagram label sheet
- #8 x 1/2" sheet metal screws and #6 x 1/2" hex head screws
- Replaces various models including Grasslin: 010-0011B, DT040, DT140, DTAV40, DTMV, DTSX. Paragon: 8041, 8045, 8047, 8141, 8143, 8145, 8245, 8247. Precision: 6041, 6045, 6047, 6141, 6145.

SPECIFICATIONS

Attribute	Value
Brand	ICM Controls
Model Number	ICM550C
Voltage	120-240VAC
Frequency	60 Hz
Output Type	Relay (SPDT, SPST)
Output Rating (Normally Closed)	30A @ 240 VAC

Attribute	Value
Output Rating (Normally Open)	40A @ 240 VAC
Minimum Defrost Time	15 minutes
Maximum Defrost Time	23 hours 45 minutes
Defrost Termination	By shorting "X to N"
Status LEDs	Red (Defrost mode), Green (Refrigeration mode)
Material	Metal
Item Weight	8 ounces (0.5 Pounds)
Product Dimensions	8 x 6 x 4 inches
UPC	732003268001

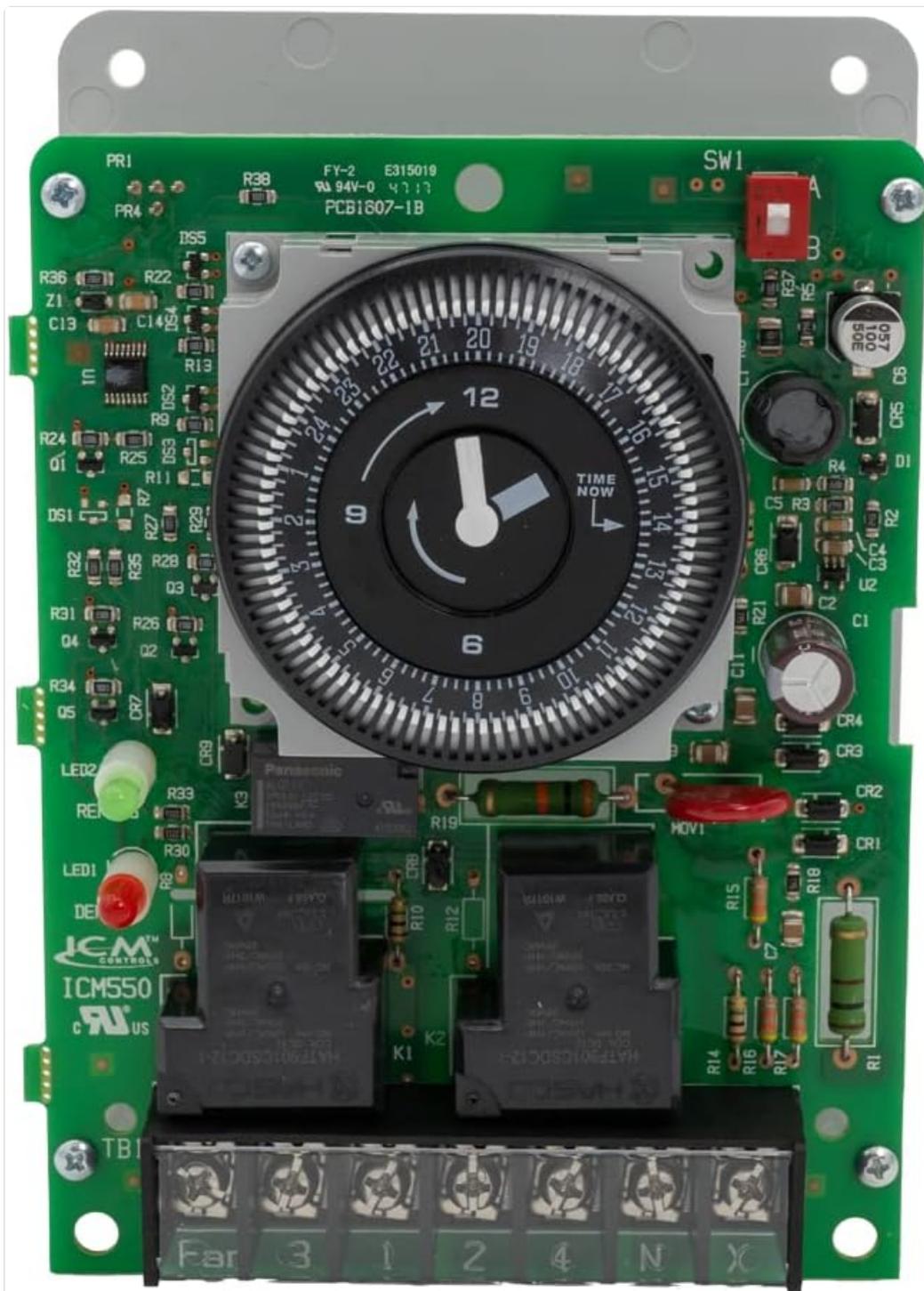


Figure 1: Top-down view of the ICM ICM550 Defrost Control Timer, showing the main components and layout.

MODE OF OPERATION

The ICM550 operates by cycling between refrigeration and defrost modes based on pre-set intervals. The operational sequence is as follows:

1. During normal operation, the unit is in **Refrigeration mode**, indicated by the **Green LED**.
2. Upon reaching the pre-set interval time for defrost, the ICM550 will initiate the **Defrost cycle**.
3. During the defrost cycle, the unit will turn off the fan and activate the backup heating source. The **Red LED** will illuminate, indicating Defrost mode.
4. The ICM550 will remain in defrost for the set defrost time (minimum 15 minutes, maximum 23 hours 45 minutes).
5. The defrost cycle can be manually terminated by shorting the "X to N" terminals.
6. At the conclusion of the set defrost time, the unit will automatically return to normal Refrigeration mode until the next

pre-set interval for defrost occurs.

INSTALLATION AND SETUP

Proper installation is crucial for the safe and effective operation of the ICM550. It is recommended that installation be performed by a qualified technician. Always disconnect power before beginning installation.

Mounting the Unit

- Select a suitable location for mounting the ICM550, ensuring it is protected from moisture and extreme temperatures.
- Use the provided bracket mount and screws (#8 x 1/2" sheet metal screws and #6 x 1/2" hex head screws) to securely fasten the unit to a stable surface.

Wiring Instructions

Refer to the included "Terminal block & wiring diagram label sheet" for specific wiring configurations. Ensure all connections are secure and comply with local electrical codes. The unit supports 120-240VAC input.

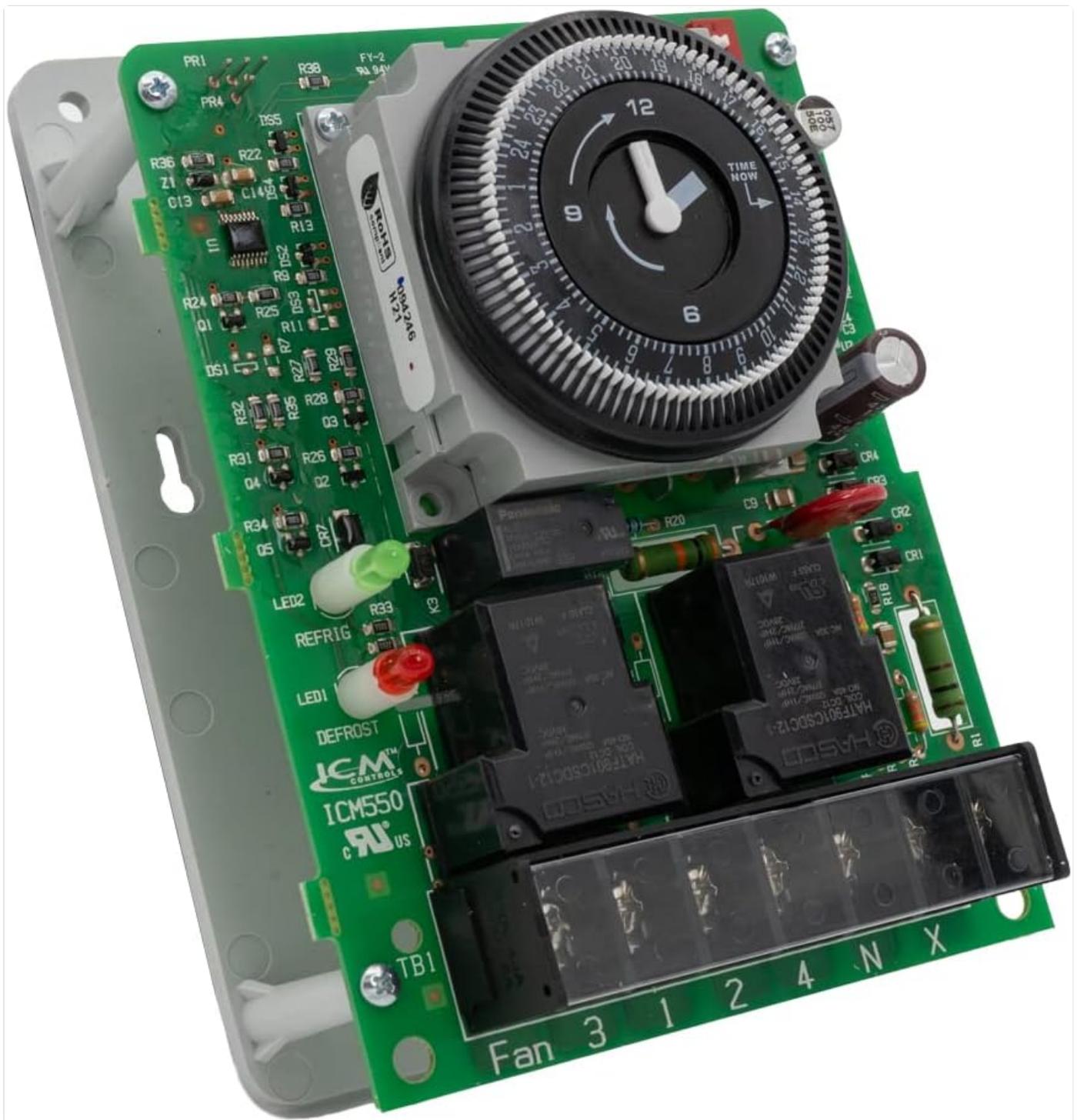


Figure 2: Angled view of the ICM ICM550, highlighting the terminal block connections for wiring.

- Connect the main power supply to the designated terminals.
- Connect the fan and heating elements to their respective output terminals as per the wiring diagram.
- Ensure proper grounding for safety.

OPERATING INSTRUCTIONS

Once installed and powered, the ICM550 will begin its operation. The central dial on the unit is used to set the current time and defrost intervals.

Setting the Time

- Rotate the central dial to align the "TIME NOW" indicator with the current time of day.

Setting Defrost Intervals

- The dial has segments that can be pushed in or pulled out to set the defrost schedule. Consult the detailed installation guide for precise instructions on setting defrost pins/segments.
- The minimum defrost time is 15 minutes, and the maximum is 23 hours 45 minutes.

Status Indicators

- **Green LED:** Indicates the unit is in Refrigeration mode.
- **Red LED:** Indicates the unit is in Defrost mode.

MAINTENANCE

The ICM550 is designed for reliable, long-term operation with minimal maintenance. However, periodic checks can help ensure optimal performance.

- **Cleaning:** Keep the unit free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents.
- **Connections:** Periodically inspect wiring connections to ensure they remain tight and free from corrosion.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity ranges to prevent damage to electronic components.
- **Power Cycle:** If the unit behaves unexpectedly, a brief power cycle (disconnecting and reconnecting power) may resolve minor issues.

TROUBLESHOOTING

If you encounter issues with your ICM550, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Unit does not power on.	No power supply; incorrect wiring; blown fuse/breaker.	Check power source. Verify wiring connections as per diagram. Inspect and reset circuit breaker or replace fuse.
Defrost cycle does not activate.	Incorrect time setting; defrost interval not set; faulty internal component.	Ensure "TIME NOW" is correctly set. Verify defrost pins/segments are properly configured. If issues persist, contact support.
Unit remains in defrost mode.	Defrost termination issue; faulty sensor/relay.	Check "X to N" termination circuit. Power cycle the unit. If problem continues, professional service may be required.
LED indicators are not functioning.	LED failure; internal circuit issue.	While LEDs indicate status, the unit may still be functioning. If operation is also affected, contact support.

For issues not covered here, or if troubleshooting steps do not resolve the problem, please contact ICM Controls customer support.

SAFETY INFORMATION

Please read and understand all safety warnings before installing or operating the ICM550 Defrost Control Timer.

- **Electrical Hazard:** This device operates with high voltage (240 Volts). Always disconnect power at the main circuit breaker before installation, maintenance, or troubleshooting. Failure to do so can result in severe injury or death.

- **Qualified Personnel:** Installation and servicing should only be performed by qualified and licensed electricians or HVAC technicians.
- **Proper Wiring:** Ensure all wiring conforms to national and local electrical codes. Use appropriate wire gauges for the current ratings.
- **Environmental Protection:** Do not expose the unit to water, excessive humidity, or extreme temperatures. Install in a dry, protected location.
- **Secure Mounting:** Ensure the unit is securely mounted to prevent accidental dislodgement or damage.
- **Intended Use:** Use this product only for its intended purpose as a defrost control timer in compatible refrigeration systems.

SUPPORT

For technical assistance, warranty information, or to inquire about replacement parts, please contact ICM Controls customer support. Refer to the official ICM Controls website for the most current contact details and additional resources. You can typically find support information on the manufacturer's official website: www.icmcontrols.com



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This manual is for informational purposes only. Specifications are subject to change without notice.