



ArcticFox Temperature & Air Defrost Control (pn 550005663)

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Introduction

The ArcticFox Temperature & Air Defrost Control is designed to simplify refrigeration cooler controls by combining the functions of a thermostat and defrost timeclock.

The ArcticFox Temperature & Air Defrost Control designed for medium temperature applications 35°F and higher provides a built-in defrost clock that may be used to perform time-initiated and time-terminated defrost cycles. The controller's single-pole-double-throw relay controls the refrigeration and defrost cycles.

ArcticFox Temperature Control for low temperature application provides an easy-to-understand thermostat, which simplifies operation and eliminates end user frustration. The ArcticFox has been integrated to provide optimal performance, and includes a battery powered clock that will ensure of proper operation once power is restored.

Applications



Features

- Thermostat
- Off time defrost on schedule or custom defrost
- Compressor protection - Maximum starts per hour
- Manual defrost
- 1st defrost 2 hrs after start up
- Visual Alarming - High temp/Low temp/Sensor

Service Call Saver - Post Defrost Indicator

To eliminate unnecessary/unwarranted service calls, the ArcticFox Temperature & Air Defrost Control (for Medium temp applications) alerts the user when it is coming out of a defrost cycle using the onboard display. The display alternates between dEF and the actual temperature measured by the air sensor. This continues until the temperature has reached setpoint, or for the amount of time set by dFt (Defrost Time) whichever is shorter.

Hardware

- Relay for solenoid / compressor
- 3 digit 7-segment display
- 4-button user interface
- Modbus terminals

The **space temperature sensor** is supplied with a 45 inch lead, and functions to control the space temperature of the room.

Communications

The ArcticFox Temperature & Air Defrost Control and the ArcticFox Temperature Control include RS-485 Modbus communication.

Specifications

Controller					
Input Voltage:		120V / 208-240V			
Storage Temp:		-13° to 120°F (-25° to 49°C)			
Operating Temp:		-40° to 120°F (-40° to 49°C)			
Display:		3 digit 7-segment LED			
IP Rating:		IP65			
Input:		1 temp. sensor (Replacement SKU 20199)			
Outputs (1) Relay Single Pole Double Throw		Normally Open		Normally Closed	
		120V	240V	120V	240V
	FLA	30A	30A	N/A	10A
	LRA	98A	80A	20A	20A
	Resistive	N/A	30A	N/A	30A
	Horsepower	1hp	2hp	1/4hp	1/2 hp
	Pilot Duty	800VA	720VA	290VA	360VA
Communciations		RS-485 (Modbus)			
Temperature Sensor					
Sensor Specs		-60° to 150°F (-51°C to 66°C) moisture resistant package			

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- Indicator lights**
- **Red light** - Not used
 - **Yellow light** - non-critical alarm (system running)
 - **Green light** - compressor on
 - **Green flashing** - compressor waiting on timer to start/stop

- **Access Setpoint mode by pressing and holding the **ENTER** button until tS (temperature setpoint) displays on the screen**
- **Use the **▲** up and **▼** down arrows to scroll through the available setpoints.**
- **Press **ENTER** to view the current setting.**
- **Use the **▲** up and **▼** to change the setpoint**
Press **ENTER to move between the digits to accelerate the changes.**
- **Press **ENTER** and hold to confirm each setpoint change**
- **Press **BACK** to escape.**

Setpoint	Description	Min.	Cooler Default	Freezer Default	Max.
tS	Temperature Setpoint	-50°F	35° F	-10° F	100° F
diF	Differential	1°	3.5° F	3.5° F	30° F
CSH	Maximum Compressor Starts/Hour	5 (Off)*	0 (off)	0 (off)	10
dPd	Defrost Per Day	0	4	0	12, CUS**
dFt	Defrost Time	0 min	30	0	720 min
HAO	High Alarm Offset	1°	10° F	10° F	10° F
LAO	Low Alarm Offset	1°	5° F	5° F	10° F
tAd	Temp Alarm Delay	1 min	60 min	60 min	180 min
Adr	Mod Bus Address	1	1	1	247
Unt	Units for temp display	FAH	FAH	FAH	CEL



Alarm Codes

When the ArcticFox Controllers are in alarm, it notifies the user by illuminating the amber LED, and displays the appropriate Alarm Code:

- SSA - Shorted Sensor Alarm**
- OSA - Open Sensor Alarm**
- HtA - High Temperature Alarm**
- LtA - Low Temperature Alarm**

*Selecting fewer than 5 compressor starts per hour results in the starts per hour feature being turned off. The compressor will then function on temperature only. ** Selecting CUS (custom) unlocks additional Setpoints. See owner's manual for details.

Dimensions - Inches

