

## INSTALLING AND OPERATING DIRECTIONS

### SET TIME

Rotate the timer dial clockwise to align the triangle on the inner dial with the desired time. The triangle represents the current time on the timer.

### DEFROST CYCLES

1. On the timer wheel, choose a defrost cycle starting time.
2. Slide the tripper upward so it is directly above the desired time. The timer will initiate a 15 minute defrost cycle at the configured time.
3. To increase the duration of the defrost cycle, slide up the trippers that are adjacent to the starting time.

**Note: Each tripper on the time wheel represents 15 minutes. For example, to set a 45 minute defrost cycle, slide the two additional trippers adjacent to the starting time.**

4. Repeat steps 1 through 3 as necessary to configure multiple defrost times for a given day.
5. Set the red override switch:
  - Set the selector switch to the center position.
  - **MANUAL OVERRIDE:** Set the switch to the "1" position to turn the load permanently ON.
  - Set the switch to the "0" position to turn the load permanently OFF.
6. Set A/B switch (upper right corner) to the proper setting for the wiring diagram chosen. (Default setting B switch).

### SUPPLY CONNECTIONS USE GAUGE SPECIFIED SUITABLE FOR 75°C (167°F)

MIN. GAUGE WIRE	8	10	12	14
MAX LOAD	40A	30A	20A	10A

USE ONLY COPPER CONDUCTORS.  
 UTILISER UNIQUEMENT DU FIL DE CUIVRE.

FOR SUPPLY CONNECTIONS: USE NO. 6 AWG OR LARGER WIRES RATED AT LEAST 105°C.

FOR DEFROST CONNECTIONS (TERMINAL X & C), USE NO. 14 AWG OR LARGER WIRES RATED AT LEAST 105°C.





**CAUTION -  
RISK OF ELECTRIC SHOCK**  
DISCONNECT ALL POWER AT MAIN  
PANEL BEFORE REMOVING INSULATOR.  
MORE THAN ONE DISCONNECT  
SWITCH MAY BE REQUIRED TO  
DE-ENERGIZE THE DEVICE FOR  
SERVICING.

REPLACE INSULATOR AFTER WIRING.  
USE COPPER CONDUCTORS ONLY.



**ATTENTION -  
RISQUE DE CHOC ÉLECTRIQUE**  
COUPEZ TOUTES LES ALIMENTATIONS  
AT PANNEAU PRINCIPAL AVANT  
DE RETIRER ISOLANT. PLUS D'UN  
SECTIONNEUR PEUT ÊTRE NÉCESSAIRE  
POUR COUPER L'ALIMENTATION DU  
DISPOSITIF POUR L'ENTRETIEN.

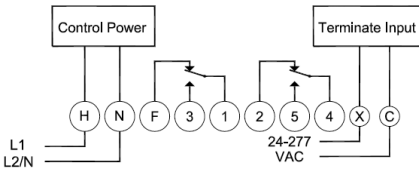
REMPLACER INSULATOR APRÈS LE  
CÂBLAGE. UTIUSER UNIQUEMENT DU  
FIL DE CUIVRE.

### 8145-AV, 8145-AV-M, 8145-AV50 and 8145-AV50M

NO Contacts (Terminal 3 & 5)			NC Contacts (Terminal 5 & 2)		
40A	Resistive	120-277V AC	30A	Resistive	120-277V AC
3 HP	Motor	240V AC	2 HP	Motor	240V AC
1.5 HP	Motor	120V AC	1/4 HP	Motor	120V AC
720VA	Pilot Duty	120-240V AC	290VA	Pilot Duty	120-240V AC

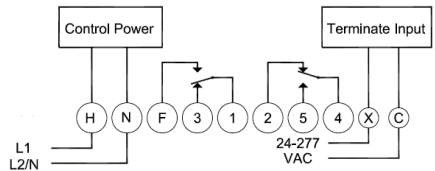
#### MODE A

Trippers are "IN" = Refrigeration mode  
Green LED is off, Red LED is On



#### MODE B

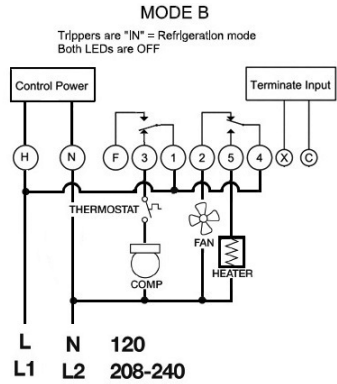
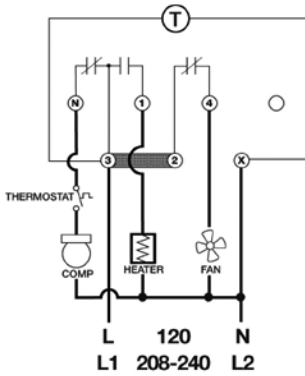
Trippers are "IN" = Refrigeration mode  
Both LEDs are OFF



Applying power (24-277V AC) between Terminate Input terminals "X" and "C" causes the unit to return to Refrigeration Mode. If the Terminate input voltage is removed while the trippers are ON, the unit remains in the Refrigeration Mode. The unit remains in Refrigeration mode until both the Terminate input voltage is removed and the trippers cycle OFF then ON again.

## 8041-00 and 8041-20

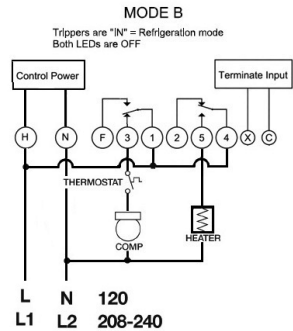
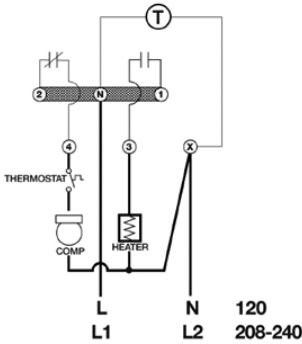
Electric Heat Defrosting



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)		COMP	(L/L1)		HEATER	(L/L1)		
8145-AV-M										
8145-AV50M										
8041-00		X		N	3	4	1	3		
8041-20	(L/L1)	(N/L2)			(L/L1)			(L/L1)		
DTAV40	3	X		4	2	N	1	3		
	(L/L1)	(N/L2)			(L/L1)			(L/L1)		

## 8045-00 and 8045-20

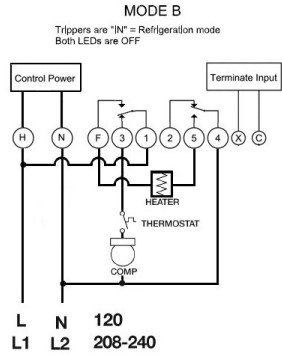
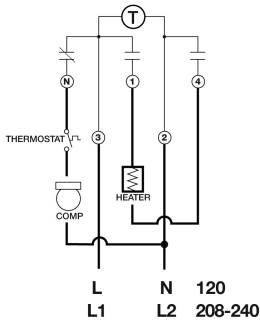
Electric Heat Defrosting



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)		COMP	(L/L1)		HEATER	(L/L1)		
8145-AV-M										
8145-AV50M										
8045-00	N	X		4	N		3	N		
8045-20	(L/L1)	(N/L2)			(L/L1)			(L/L1)		
DTAV40	1-N	X		4	1-N		3	2		
	(L1)	(L2)			(L1)			(L1)		

## 8047-00 and 8047-20

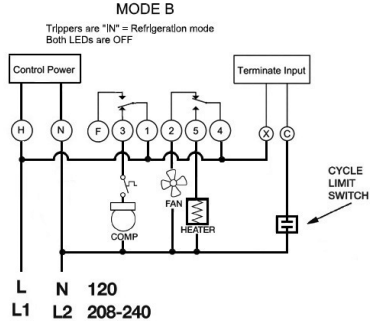
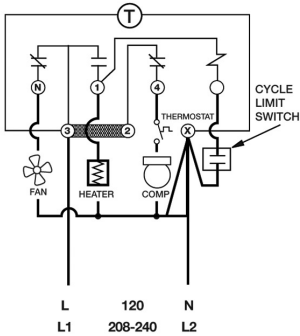
### Electric Heat Defrosting



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)	HEATER	COMP	(L/L1)		HEATER	(N/L2)		
8145-AV-M										
8145-AV50M										
8047-00	3	2	1	N	3		4	2		
8047-20	(L/L1)	(N/L2)	HEATER	COMP	(L/L1)		HEATER	(N/L2)		
DTAV40	3	2	1	N	3		4	2		
	(L/L1)	(N/L2)	HEATER	COMP	(L/L1)		HEATER	(N/L2)		

## 8141-00 and 8141-20

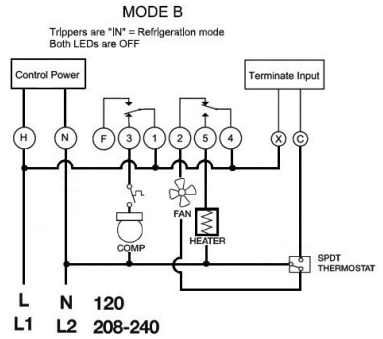
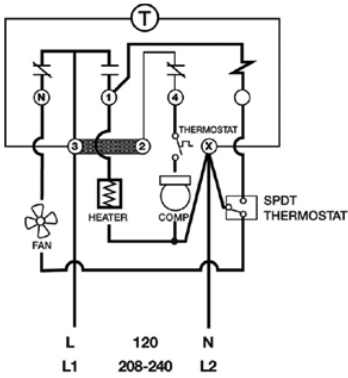
### Electric Heat Defrosting (Cycle Limit Switch)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)		COMP	(L/L1)	FAN	HEATER	(L/L1)	(L/L1)	LIMIT
8145-AV-M										
8145-AV50M										
8141-00	3	X		4	3	N	1	3	3	INPUT
8141-20	(L/L1)	(N/L2)		COMP	(L/L1)	FAN	HEATER	(L/L1)	(L/L1)	LIMIT

## 8141-00 and 8141-20

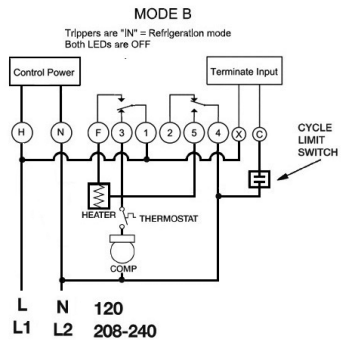
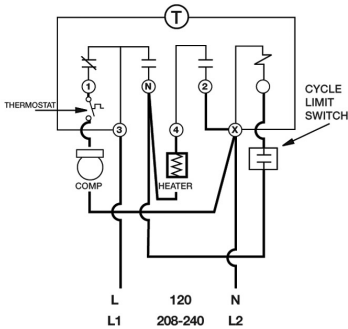
### Electric Heat Defrosting (SPDT Thermostat)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)		COMP	(L/L1)	FAN	HEATER	(L/L1)	(L/L1)	SPDT
8145-AV-M										
8145-AV50M										
8141-00	3	X		4	3	N	1	3	3	INPUT
8141-20	(L/L1)	(N/L2)		COMP	(L/L1)	FAN	HEATER	(L/L1)	(L/L1)	SPDT
DTAV40	3	X		4	2	N	1	3	3	INPUT
	(L/L1)	(N/L2)		COMP	(L/L1)	FAN	HEATER	(L/L1)	(L/L1)	SPDT

## 8143-00 and 8143-20

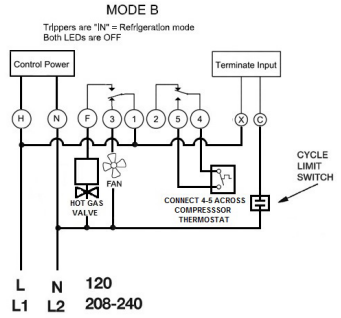
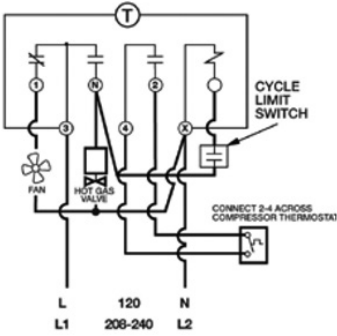
### Electric Heat Defrosting (Cycle Limit Switch)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)	HEATER	COMP	(L/L1)		HEATER	(N/L2)	(L/L1)	LIMIT
8145-AV-M										
8145-AV50M										
8143-00	3	X	N	1	3		4	X	3	INPUT
8143-20	(L/L1)	(N/L2)	HEATER	COMP	(L/L1)		HEATER	(N/L2)	(L/L1)	LIMIT
DTAV40	3	X	N	1	3		4	2	3	INPUT
	(L/L1)	(N/L2)	HEATER	VALVE	(L/L1)		HEATER	(N/L2)	(L/L1)	STAT

## 8143-00 and 8143-20

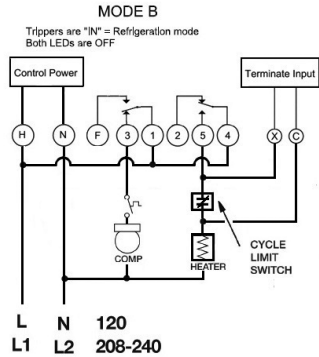
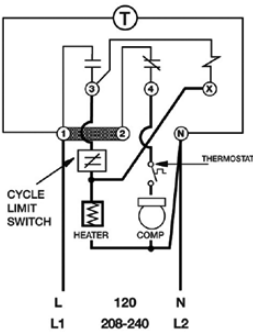
### Hot Gas Defrosting (Cycle Limit Switch)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)	H GAS	FAN	(L/L1)		TSTAT	TSTAT	(L/L1)	LIMIT
8145-AV-M										
8145-AV50M										
8143-00	3	X	N	1	3		2	4	3	INPUT
8143-20	(L/L1)	(N/L2)	H GAS	FAN	(L/L1)		TSTAT	TSTAT	(L/L1)	LIMIT

## 8145-00 and 8145-20

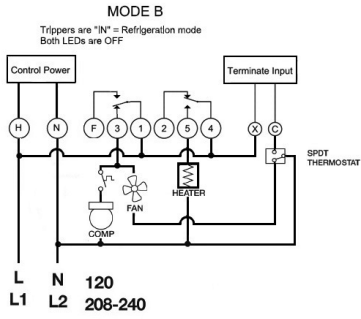
### Electric Heat Defrosting (Cycle Limit Switch)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)	COMP	COMP	(L/L1)		LIMIT	(L/L1)	5/LIMIT	HEATER/ LIMIT
8145-AV-M										
8145-AV50M										
8145-00	1	N		4	1		3	1		X
8145-20	(L/L1)	(N/L2)		COMP	(L/L1)		LIMIT	(L/L1)		HEATER/ LIMIT

# 8145-00 and 8145-20

## Electric Heat Defrosting (SPDT Thermostat)



8145-AV	H	N	F	3	1	2	5	4	X	C
8145-AV50	(L/L1)	(N/L2)		COMP	(L/L1)		HEATER	(L/L1)	(L/L1)	SPDT
8145-AV-M				FAN						
8145-AV50M										
DTAV40	1	N		4	2		3	1	1	X
	(L/L1)	(N/L2)		COMP	(L/L1)		HEATER	(L/L1)	(L/L1)	SPDT
				FAN						



Customer Service Telephone 1.800.304.6563  
Customer Service Facsimile 1.800.426.0804  
HVACCustomerService@robertshaw.com

For Technical Service  
Telephone 1.800.445.8299  
TechnicalService@robertshaw.com

Robertshaw®, Paragon® and Uni-Line® are  
trademarks of Robertshaw its subsidiaries and/or  
affiliated companies. All other brands mentioned  
may be the trademarks of their respective owners.

www.robertshaw.com  
©2018 Robertshaw  
03/18 – 352-00259-001 Rev B