

# **PARAGON®**

## **8000 SERIES**

## **AUTO VOLTAGE DEFROST TIMERS**

# **ALL IN ONE**

**Now available: 50 Hz and 60 Hz models**



8145-AV

The Paragon® 8000 Series Auto Voltage Defrost Timer is designed for commercial freezers and refrigerators. Paragon Defrost Controls have provided reliable automatic defrost capability for decades. They accommodate various types of defrost systems including electric defrost heaters, hot gas, and compressor off cycle.

This all-in-one auto voltage defrost timer replaces over 40 competitive voltage-specific mechanical defrost timers, eliminating the need for a separate short cycle timer and single-phase voltage monitor. The 8145-AV will become a mainstay in any contractor's truck. The 8145-AV reduces installation time and minimizes the number of SKUs to stock.

### **Features and Benefits**

- Replaces over 40 competitive models
- Now Available in 50 Hz and 60 Hz models
- Auto voltage automatically adjusts for 120-240V AC
- Compressor contacts 3HP
- Heater/fan contacts 2HP
- LED indicators for defrost and refrigeration cycles
- Built-in permanent housing protects components from damage
- Mounts into existing Paragon enclosures, no tools required
- Real-time clock face for easy accurate settings
- Defrost times programmable in 15-minute intervals with captive trippers
- Heavy-duty steel enclosure with knockouts (on the bottom, back and side) and hasp
- Mechanism only models also available 8145-AV-M (60 Hz model) and 8145-AV50M (50 Hz model)

**1** Year  
Limited  
Warranty

**UL** US  
LISTED  
Listed  
Product



# 8000 SERIES

# AUTO VOLTAGE DEFROST TIMERS

## Specifications - for all models

Part Numbers	Description	Normally Open Contact Terminal 3 and 5			Normally Closed Contact Terminal F and 2		
8145-AV	Auto Voltage Defrost Timer in Metal Casing 60 Hz	40A	Resistive	120-240V AC	30A	Resistive	120-240V AC
8145-AV-M	Auto Voltage Defrost Timer Mechanism Only 60 Hz	3HP	Motor	240V AC	2HP	Motor	240V AC
		1.5HP	Motor	120V AC	1/4HP	Motor	120V AC
		720VA	Pilot Duty	120-240V AC	290VA	Pilot Duty	120-240V AC
8145-AV50	Auto Voltage Defrost Timer in Metal Casing 50 Hz	40A	Resistive	120-240V AC	30A	Resistive	120-240V AC
8145-AV50M	Auto Voltage Defrost Timer Mechanism Only 50 Hz	3HP	Motor	240V AC	2HP	Motor	240V AC
		1.5HP	Motor	120V AC	1/4HP	Motor	120V AC
		720VA	Pilot Duty	120-240V AC	290VA	Pilot Duty	120-240V AC

## Replacement Information

Supco®	Grasslin/Intermatic®	Precision	Paragon®
S804100	DTAV40	6041-0	8041-00
S804120	DTAV40IM	6045-0	8041-20
S804500	DTAV40M	6045-20	8043-00
S804520	G8045-00	6141-0	8043-20
S814100	G8045-20	6141-20	8045-00
S814120	G8145-00	6145-20	8045-20
S814500	G8145-20		8045-21
S814520			8046-00
M814520			8046-20
			8047-00
			8047-20
			8141-00
			8141-20
			8141-21
			8143-00
			8143-20
			8145-00
			8145-20
			8145-21
			8243-20
			8245-20
			8247-20

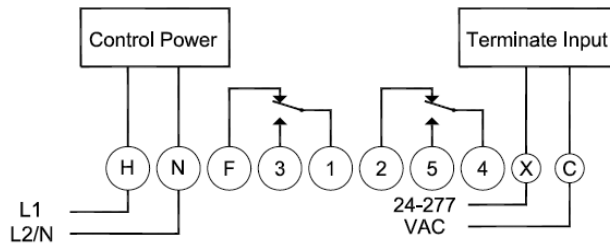
### Wiring Diagrams

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

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

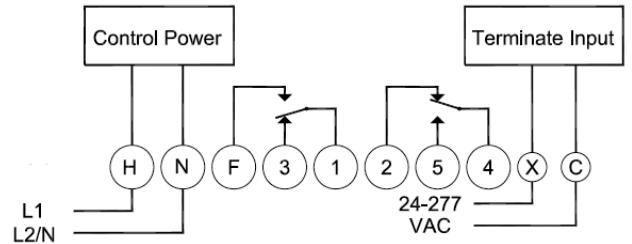
#### MODE A

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



#### MODE B

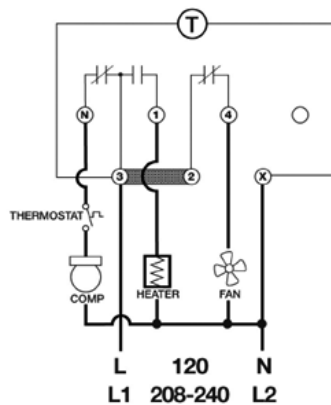
Trippers are "IN" = Refrigeration mode  
Both LEDs are OFF



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 until both the Terminate input voltage is removed and the trippers cycle OFF then ON again.

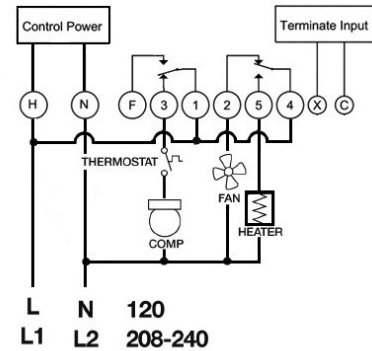
#### 8041-00 and 8041-20

Electric Heat Defrosting



#### MODE B

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

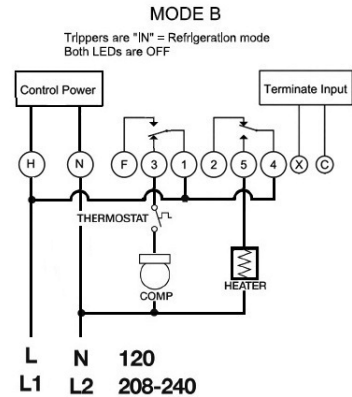
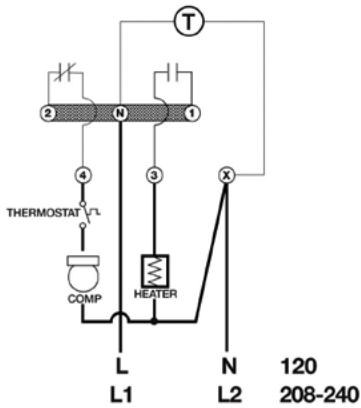


8145-AV 8145-AV50 8145-AV-M 8145-AV50M	H (L/L1)	N (N/L2)	F	3 COMP	1 (L/L1)	2 FAN	5 HEATER	4 (L/L1)	X	C
8041-00 8041-20	3 (L/L1)	X (N/L2)		N	3 (L/L1)	4	1	3 (L/L1)		
DTAV40	3 (L/L1)	X (N/L2)		4	2 (L/L1)	N	1	3 (L/L1)		

### Wiring Diagrams

#### 8045-00 and 8045-20

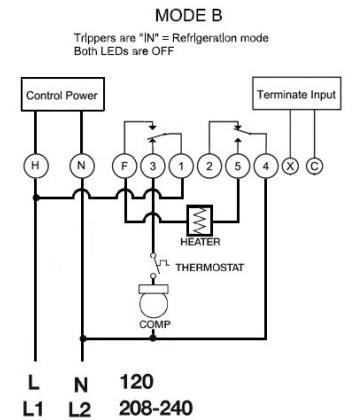
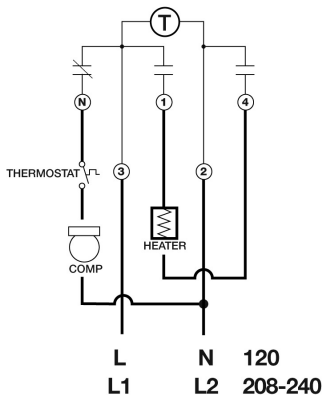
Electric Heat Defrosting



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

#### 8047-00 and 8047-20

Electric Heat Defrosting

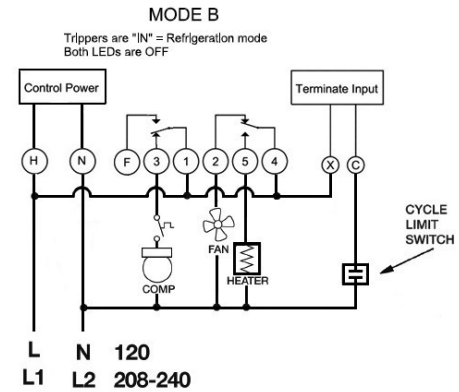
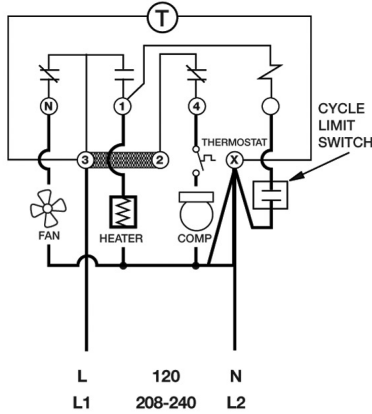


8145-AV 8145-AV50 8145-AV-M 8145-AV50M	H (L/L1)	N (N/L2)	F HEATER	3 COMP	1 (L/L1)	2	5 HEATER	4 (N/L2)	X	C
8047-00 8047-20	3 (L/L1)	2 (N/L2)	1 HEATER	N COMP	3 (L/L1)		4 HEATER	2 (N/L2)		
DTAV40	3 (L/L1)	2 (N/L2)	1 HEATER	N COMP	3 (L/L1)		4 HEATER	2 (N/L2)		

### Wiring Diagrams

#### 8141-00 and 8141-20

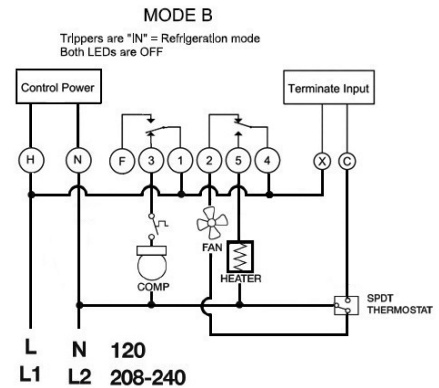
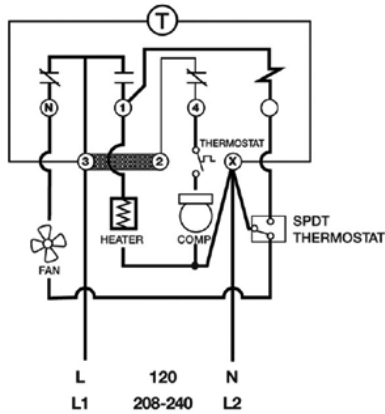
Electric Heat Defrosting (Cycle Limit Switch)



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

#### 8141-00 and 8141-20

Electric Heat Defrosting (SPDT Thermostat)

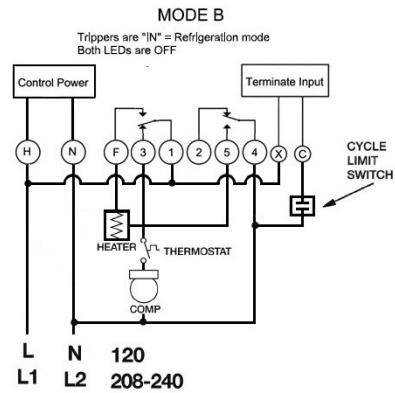
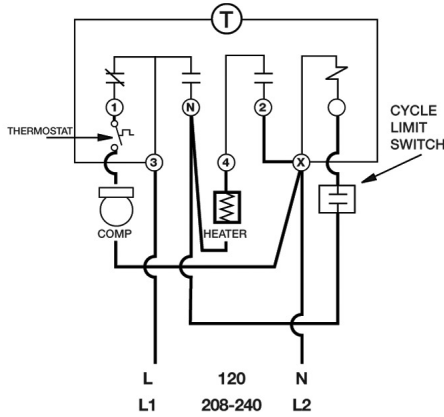


8145-AV 8145-AV50 8145-AV-M 8145-AV50M	H (L/L1)	N (N/L2)	F	3 COMP	1 (L/L1)	2 FAN	5 HEATER	4 (L/L1)	X (L/L1)	C SPDT
8141-00 8141-20	3 (L/L1)	X (N/L2)		4 COMP	3 (L/L1)	N FAN	1 HEATER	3 (L/L1)	3 (L/L1)	INPUT SPDT
DTAV40	3 (L/L1)	X (N/L2)		4 COMP	2 (L/L1)	N FAN	1 HEATER	3 (L/L1)	3 (L/L1)	INPUT SPDT

### Wiring Diagrams

#### 8143-00 and 8143-20

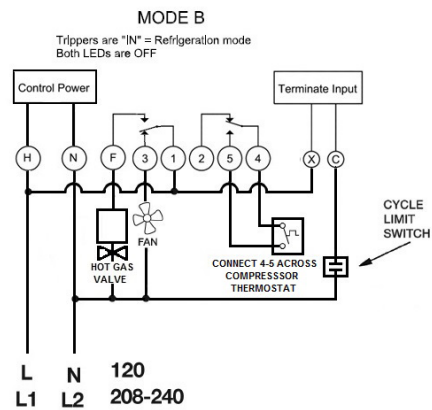
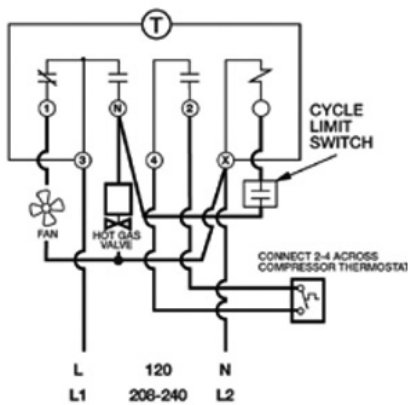
Electric Heat Defrosting (Cycle Limit Switch)



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

#### 8143-00 and 8143-20

Hot Gas Defrosting (Cycle Limit Switch)

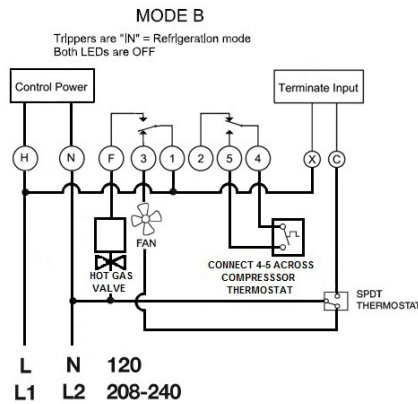


8145-AV 8145-AV50 8145-AV-M 8145-AV50M	H (L/L1)	N (N/L2)	F H GAS	3 FAN	1 (L/L1)	2	5 TSTAT	4 TSTAT	X (L/L1)	C LIMIT
8143-00 8143-20	3 (L/L1)	X (N/L2)	N H GAS	1 FAN	3 (L/L1)		2 TSTAT	4 TSTAT	3 (L/L1)	INPUT LIMIT

### Wiring Diagrams

#### 8143-00 and 8143-20

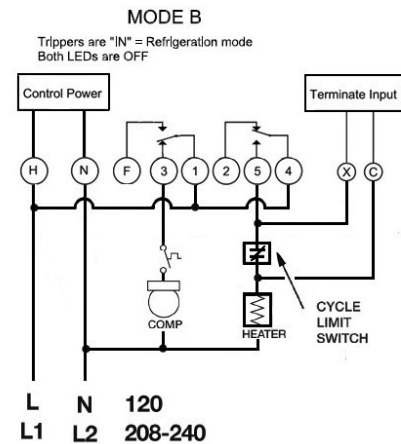
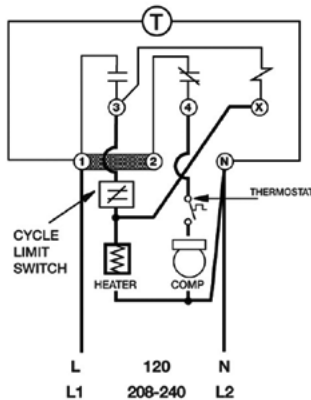
Hot Gas Defrosting (SPDT Thermostat)



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

#### 8145-00 and 8145-20

Electric Heat Defrosting (Cycle Limit Switch)

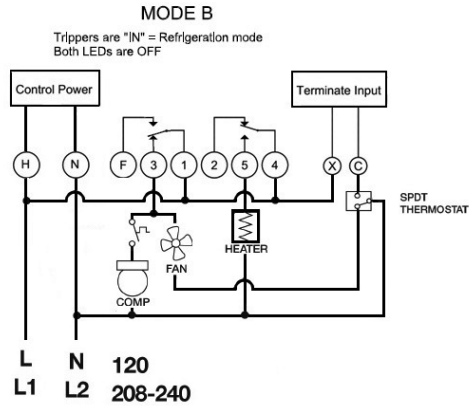


8145-AV 8145-AV50 8145-AV-M 8145-AV50M	H (L/L1)	N (N/L2)	F	3 COMP	1 (L/L1)	2	5 LIMIT	4 (L/L1)	X 5/LIMIT	C HEATER/ LIMIT
8145-00 8145-20	1 (L/L1)	N (N/L2)		4 COMP	1 (L/L1)		3 LIMIT	1 (L/L1)		X HEATER/ LIMIT

### Wiring Diagrams

#### 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	1	X
	(L/L1)	(N/L2)		COMP	(L/L1)	HEATER	(L/L1)	(L/L1)	(L/L1)	SPDT
				FAN						



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