

Heat Sequencers

Electric Heat Sequencers- ZC24A34 Series

The following models will replace sequencers in almost any electric heating system. Sequencers may be used on both separate blower and element and combination blower and element systems. Select the sequencers based on the number of circuits to be switched. When more than one sequencer is required, just wire the sequencers in series with the last switch of each sequencer energizing the control circuit of the next sequencer. If the sequencers control the fan/blower circuit, the first switch, M-1-M2, of each sequencer must always control the fan. This assures that the fan will remain on until all elements are de-energized.

Features and Benefits:

- Solid state PTC heaters
- Replaces most Klixon and TOD brands
- Quick-connect terminals
- Shock and vibration resistant
- Mounts in any position
- Contact ratings— to 25A at 120 or 240V, and 12.5A at 480V
- Full-load rating auxiliary contacts
- Standard operating ambience between -50° F (-45.5° C) and 165° F (73.8° C)
- UL File E237660, UL873; CSA approved



Standard Timings:

Global No.	Timings	Switches	Action	Timings—ON					Timings—OFF					Case Qty
				M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	
24ZC-1	1	1	SPST	1-20	—	—	—	—	40-110	—	—	—	—	160
24ZC-2	1	1	SPST	—	—	30-90	—	—	—	—	1-30	—	—	160
24ZC-3	1	2	DPST	1-20	§ 1-20	—	—	—	40-110	§ 40-110	—	—	—	160
24ZC-4	1	2	DPST	—	—	30-90	§ 30-90	—	—	—	1-30	§ 1-30	—	160
24ZC-5	2	3	1 DPST/ 1 SPST	1-110	§ 1-110	1-110	—	—	1-110	§ 1-110	1-110	—	—	80
24ZC-6	2	4	2 DPST	1-110	§ 1-110	1-110	§ 1-110	—	1-110	§ 1-110	1-110	§ 1-110	—	80
24ZC-14	4	5	1 SPST/ 2 DPST	1-160	§ 1-160	1-160	1-160	1-160	1-160	§ 1-160	1-160	1-160	1-160	—

Table Notes:

(1) M1-M2 and M3-M4 are always first switches to turn ON and to turn OFF. All other switches are random ON and random OFF.

(2) 24A34-14 switch contacts designated F1-F2 instead of M1-M2.

§ These contacts switch simultaneously

ON TIME— Elapsed time to make contacts after heater is energized (min to max)

OFF TIME— Elapsed time to make contacts after heater is de-energized (min to max)

OFF Timings are determined after PTC heater has been electrified for a total of 5 minutes.

Standard Timings determined at 25° C. Timings at temperatures above or below 25° will vary.

Heat Sequencers Cont.

Electrical Ratings (24ZC-1—24ZC-14):

Single Load Contact Ratings (All Models)								
VAC	Resistive (Non-Inductive)				Motor Ratings (Inductive)		Pilot Duty	UL Endurance Cycles
	NO Contacts (terminals 1-3)		NC Contacts (terminals 1-2)					
	Watts	Amps	Watts	Amps	Full Load	Locked Rotor		
120	3000	25.0	1200	10.0	10.0A	60.0A	125VA	100K
240	6000	25.0	1200	5.0	5.0A	30.0A	125VA	
480	6000	12.5	—	—	3.0A	18.0A	480VA	

Combined Load Contact Ratings (all Models):

30A @ 240 VAC Example: 23A non-inductive + 7 FLA / 42 LRA inductive

Heater Pole:

24 VAC .018 (Anticipator)

0.75 A Max Inrush

0.16 to 0.20 Amps Steady State

Ambient Rating: -50° to 165°F

Heat Sequencers— Air Handler Applications

Heat Pump Air Handler Applications— 24ZC-15

The 24ZC-15 utilizes a single bi-metal disc in a single pole double throw configuration. The SPDT switch action allows for a single set of timings. Mainly used in heat pump air handlers by providing a delay to the blower motor in cooling mode.



Standard Timings:

Model	Timing	Switches	Heat	Cool
24ZC-15	1	1	1-25	65-115

Electrical Ratings:

NO Contacts— Terminals 1-3						
VAC	Resistive (Non-Inductive)		Motor Ratings (Inductive)		Pilot Duty	UL Endurance Cycles
	Watts	Amps	Full Load	Locked Rotor		
	Watts	Amps	Full Load	Locked Rotor	Pilot Duty	UL Endurance Cycles
120	3000	25	14	72	125	30K
240	6000	25	7	42	125	
480	6000	25	3	18	480	

NC Contacts— Terminals 1-2			
VAC	Resistive (Non-Inductive)		Pilot Duty
	Watts	Amps	
	Watts	Amps	Pilot Duty
120	1200	10.0	125
240	1200	5.0	125

Heat Sequencer Cross Reference

Global	Zettler	Supco	Gem	Mars	Watsco	Klixon	White Rogers	Robertshaw	OEM
24ZC-1 — —	ZC24A34-1 — —	Q101	GS101 — —	33241 33841 —	TDR10 — —	6000AONI-98 — —	24A34-1 24A34-7 24A34-13	611-241 — —	Goodman® B1290906 Lennox® 12F20 & 58C9701 York® 525-37322-000
24ZC-2 —	ZC24A34-2 —	Q102	GS102 —	33242 33842	TDR15 —	6000AONI-97 —	24A34-2 —	611-242 —	Carrier® 40CF680020
24ZC-3 — — —	ZC24A34-3 — — —	Q103	GS103 — — —	33244 33844 — —	TDR20 — — —	6000AONI-87 60000EO-102 — —	24A34-3 — — —	611-244 — — —	ICP® / Carrier® HN67QC005 ICP® / Carrier® HQ1056789 Goodman® BT1256504
24ZC-4 — —	ZC24A34-4 — —	Q104	GS104 — —	33245 33845 —	TDR25 — —	60000EO49 — —	24A34-4 — —	611-245 — —	York® 525-37325-000 ICP® / Carrier® HN67QC006
24ZC-5 —	ZC24A34-5 —	Q105	GS105 —	33232 33832	TDR30 —	51172-32 —	24A34-5 24A34-54	611-232 —	York® 525-37327-000 Coleman® 3120A357
24ZC-6 —	ZC24A34-6 —	Q106	GS106 —	33233 33833	TDR35 —	51172-33 —	24A34-6 —	611-233 —	ICP® / Carrier® HN67QC008 ICP® / Carrier® P284-1313
24ZC-14	ZC24A34-14	Q107	GS107	33848	—	51172-35-1	24A34-14	611-007	York® 525-37328-000

1. All sequencers have a 24 volt heater

2. Part numbers are intended solely for identification, items offered are not represented to be manufactured by the company that built the original equipment.