

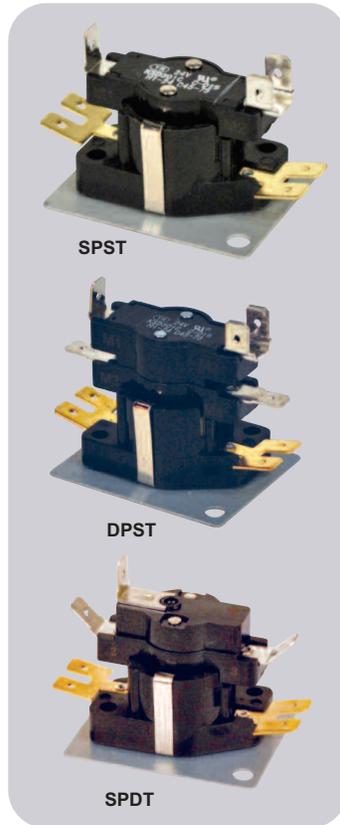
Relays & Sequencers

Thermal Time Delay Relays Sequencers

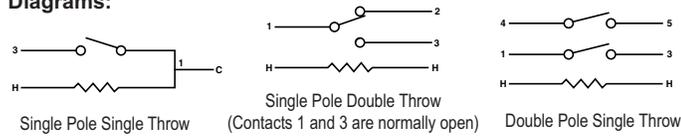
These time delay relays are used for a variety of applications in heating and air conditioning. They operate by means of a solid state PTC (positive temperature coefficient) device which heats up as current passes through it from the control circuit. This heat causes a positive, snap-acting disc to make or break the necessary contacts.

Features:

- Shock & vibration resistant internal snap action automatic reset switch mechanism assures positive make/ break action
- Non-positional
- Wide selection for any application
- Voltage and ambient compensated
- UL and CSA listed
- Used for electric heat, air conditioning, heat pumps, gas & oil furnaces, unit heaters and commercial refrigeration



Diagrams:



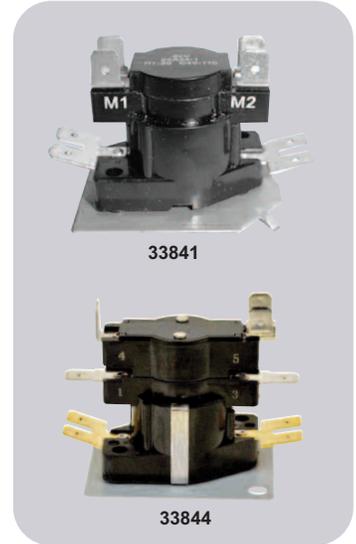
MARS NO.	REPLACES KLIXON NO.	SWITCH TYPE	CONTROL VOLTAGE	DELAY (SEC.)	
				ON	OFF
33215	G0-18		24	1-60	1-45
33217	G4-9		240	20-70	20-80
33241	AOM		24	1-24	45-75
33242	AOM	SPST N.O.	24	30-75	1-40
33243	AOM		24	1-60	1-45
33244	EOM		24	1-24	45-75
33245	EOM	DPST N.O.	24	30-75	1-40
33246	EOM		24	1-60	1-45
33247	COM-21	SPDT 1 & 3 N.O.	24	1-24	15-75
33256	E4	DPST N.O.	120	20-70	20-80
33265	E4	DPST N.O.	240	30-110	15-65
33266	E4		240	20-70	20-80
33267	C4M-13	SPDT 1 & 3 N.O.	240	20-70	20-80

Electric Heat Sequencers

The MARS heat sequencers are used in a variety of applications, including electric furnaces, baseboard heaters, heat pump blower control and heating element control. The sequencers stage electric heat to prevent circuit overload. These units operate by means of a PTC (positive temperature coefficient). The PTC is self current limiting, ensuring stable switching action over a wide range of voltages.

Features:

- Solid state dependability
- Replaces Honeywell, White Rodgers, and Klixon
- 12.5A to 25A contact ratings
- Quick connect terminals
- Various mounting positions
- Shock & vibration resistant
- Ambient rated from -50°F to 165°F
- Full-load rated auxiliary contacts



Single Load Contact Ratings

VAC	RESISTIVE (NON-INDUCTIVE)			MOTOR RATINGS (INDUCTIVE)	
	WATTS	AMPS	FULL LOAD	LOCKED ROTOR	PILOT DUTY
120	3000	25	10A	60A	125VA
240	6000	25	5A	30A	125VA
480	6000	12.5	3A	18A	480VA

Combined Load Ratings: 30A @ 240VAC - Total: 23A non-inductive + 7FLA / 42LRA inductive
Life at rated current: 10,000 cycles

MARS NO.	TIM.	SW.	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10
33841	1	1	1-20	-	-	-	-	40-110	-	-	-	-
33842	1	1	-	-	30-90	-	-	-	-	1-30	-	-
33844 ⁽¹⁾	1	2	1-20 ■	1-20	-	-	-	40-110 ■	0-110	-	-	-
33845	1	2	-	-	30-90 ■	30-90	-	-	-	1-30 ■	1-30	-
33832 ⁽¹⁾	2	3	1-110 ■	1-110	1-110	-	-	1-110 ■	1-110	1-110	-	-
33833 ⁽¹⁾	2	4	1-110 ■	1-110	1-110 ■	1-110	-	1-110 ■	1-110	1-110 ■	1-110	-
33848 ⁽¹⁾⁽²⁾	4	5	1-160 ■	1-160	1-160	1-110	1-160	1-160 ■	1-160	1-160	1-160	1-160

(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) #33848 - 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 determined after PTC heater has been electrified for a total of 5 minutes.