

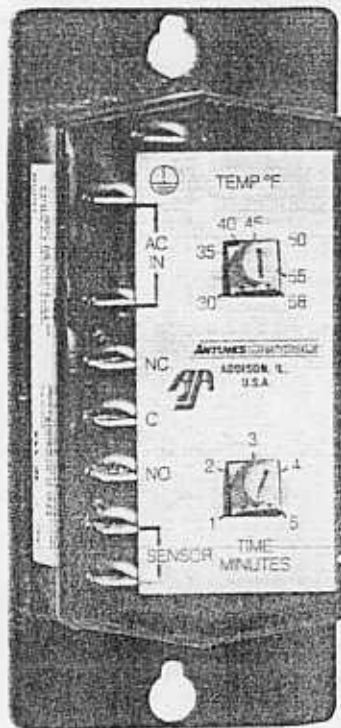
AA ANTUNES CONTROLS

DIVISION OF A.J. ANTUNES & CO.

FREEZESTAT

MODEL-TCF

TEMPERATURE CONTROLLER AND TIMER



FEATURES

- Solid State for Reliability
- Temperature Adjustment Range 30°F to 58°F (1°C to 14°C)
- Time Delay Adjustment Range 1 Minute to 5 Minutes
- 10A @ 240Vac (Resistive) Relay Contact Output
- Quick Unit is Potted-Watertight Case
- Quick Connect Terminals For Easy, Quick Installation
- Thermistor With 10 Foot Cable (Standard)
- Ambient Temperature -30°F To 140°F
- Input Power 115 Or 230Vac 60HZ
- Storage Temperature -40°F To 180°F
- Package Epoxy Resin
- U.L. E89722 CSA. LR25144

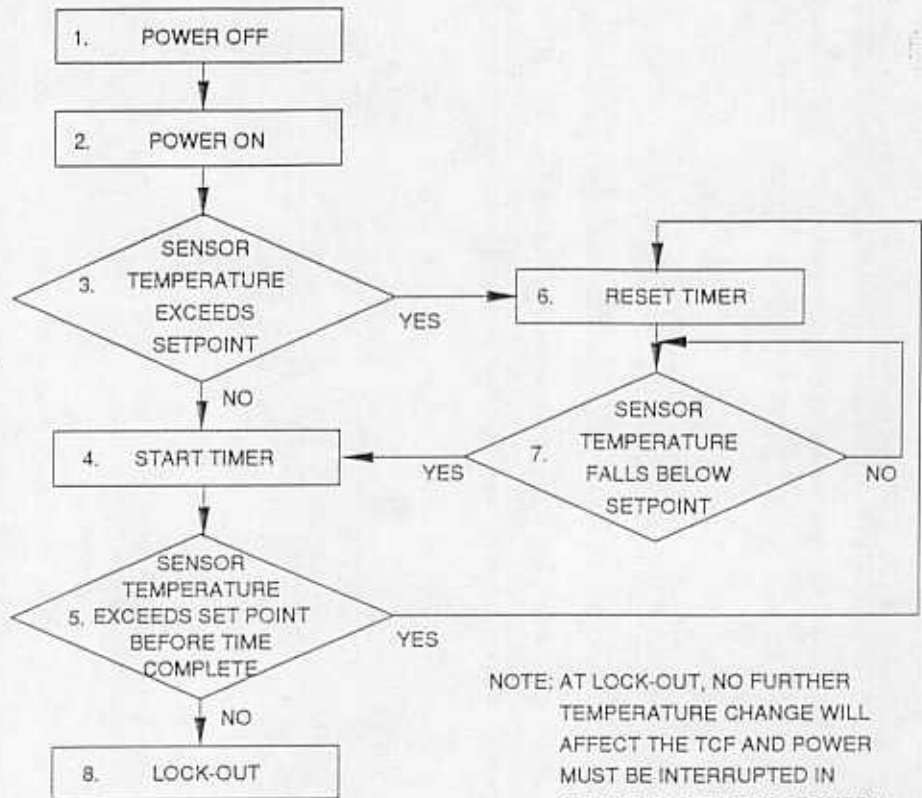
TYPICAL APPLICATION

Air make up systems, used to ensure that discharge air is above a preset temperature after a preset time. Temperature and time delay are individually adjustable. A thermistor sensor monitors discharge air. If the temperature of the air does not exceed the temperature

setting of the unit before the time delay setting, relay contacts change state to shut the system down. Can also be used in low limit applications to signal burner turn on.

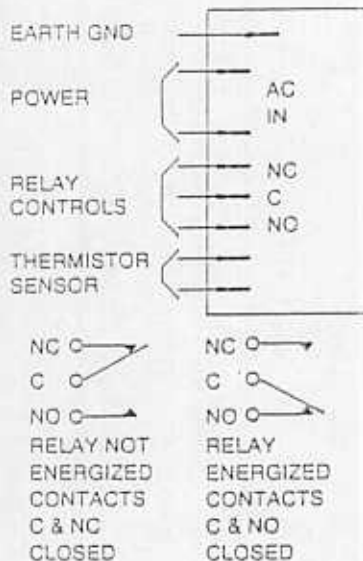
TCF CONTROL LOGIC OPERATION

1. THE TCF DOES NOT HAVE ANY POWER THE RELAY IS NOT ENERGIZED (NC AND C CONTACTS ARE MADE), GO TO STEP 2.
2. POWER IS APPLIED TO THE TCF, GO TO STEP 3.
3. IF THE TEMPERATURE SENSOR EXCEEDS THE SETPOINT, GO TO STEP 6, IF NOT, GO TO STEP 4.
4. THE PRESELECTED TIMING STARTS (NC & C REMAIN CLOSED DURING TIMING), GO TO STEP 5.
5. IF AFTER THE TIMING HAS COMPLETED AND THE SENSOR TEMPERATURE IS ABOVE THE SETPOINT, GO TO STEP 6, IF NOT, GO TO STEP 8.
6. THE TCF TIMER IS RESET TO ZERO (NC & C CONTACTS REMAIN CLOSED), GO TO STEP 7.
7. IF THE SENSOR TEMPERATURE DROPS BELOW THE SETPOINT, GO BACK TO STEP 4, IF NOT, WAIT AT STEP 7.
8. THE TCF IS LOCKED-OUT AND THE RELAY ENERGIZES (NC & C CONTACTS OPEN, NO & C CONTACTS CLOSE).

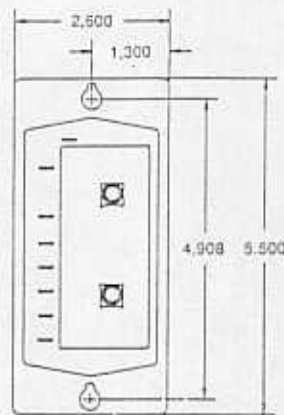


NOTE: AT LOCK-OUT, NO FURTHER TEMPERATURE CHANGE WILL AFFECT THE TCF AND POWER MUST BE INTERRUPTED IN ORDER TO RESTART AT STEP 1.

WIRING DIAGRAM

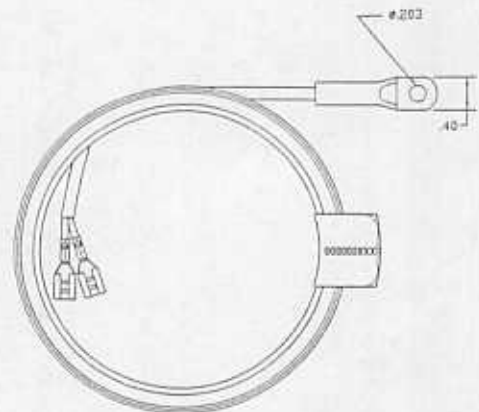


DIMENSIONS



MOUNTING KEYHOLES ARE PROVIDED WITH A 0.343" DIAMETER TO ALLOW FOR MOST #6 OF #6 PAN-HEAD SCREWS

THERMISTOR SENSOR



ONE PROVIDED WITH EACH UNIT.

ANTUNES CONTROLS

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