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Temperature Monitoring Control (TMC) SPECIFICATIONS

AS MANUFACTURED BY HEAT-TIMER CORPORATION

A TEMPERATURE MONITORING CONTROL FOR DOMESTIC HOT WATER AND HEATING AND COOLING SYSTEMS

The contractor shall furnish and install a microprocessor based electronic tempering valve control system. The control shall operate on 120VAC, with a maximum power of 20 VA. It shall be provided with a NEMA-1 enclosure and pre-engineered and programmed for the operation in a domestic hot water or heating and cooling applications. It shall be capable of controlling a Setpoint of -30°F to 250°F. It shall have a heating or cooling selectable operating mode option.

SEQUENCE OF OPERATION

The TMC shall operate in either heating or cooling application. When connected to a normally closed solenoid valve, it shall energize the solenoid valve for normal operation. However, when system temperature drops (in cooling mode) or increases (in heating mode) above the set point, the TMC will de-energize the solenoid valve relay, turn on alarm light, and energize both alarm relays. The TMC will stay in that state until system temperature is back within normal operation limit and the manual reset button has been pushed.

DISPLAY AND OUTPUT LIGHTS

The control shall have three-digit seven-segment display capable of displaying both numbers and characters. The display shall be visible with no ambient light. All control operation information shall be available for display.

The control shall have an LED light that will indicate control output relay operation status. An Alarm light shall be an integral part of the control. It shall indicate if the control is in alarm mode.

MANUAL RESET

The control shall have a manual reset button that will exit the control from its alarm status. The reset function shall only work when the temperature has dropped below Setpoint and differential (in heating mode) or above Setpoint minus differential (in cooling mode) and the reset button is pressed. In addition, the TMC shall have a safety feature that will put control in alarm mode whenever it is powered up or after loss of power.

MEMORY & BACKUP

The control shall store all configuration and settings on EE Prom. In case of power failure, the control shall be able to retrieve all of its latest settings when power is restored.

SENSORS

The sensor circuitry shall be capable of one standard sensor input. Standard sensor input shall be of the thermistor type. Thermistor operating temperature range shall be -30° to 250°F. Should the sensor go to fault condition, control shall automatically de-energize the solenoid valve causing it to close until sensor is restored.